

JANUARY 1955

ARCHITECTURAL
RECORD

OHIO STATE
UNIVERSITY
JAN 25 1955

BUILDING TYPES STUDY NUMBER 218
COLLEGE BUILDINGS



New Arrow Park plant of The Parker Pen Co., Janesville, Wisconsin. Archt.—John J. Flad & Son, Madison, Wisconsin; Contr.—T. S. Willis, Janesville, Wisconsin; Pozzolith Ready-Mixed Concrete supplied by Janesville Sand and Gravel Co., Janesville, Wisconsin.

POZZOLITH*...an aid here to better quality concrete

Better quality spells better performance, whether applied to the Parker Pens made in this beautiful new plant, or to the Pozzolith Concrete used in building it.

For the contractor, better quality concrete with Pozzolith means easier placeability, even though water is reduced as much as 15%, less bleeding, no segregation.

For the architect and engineer, concrete produced with Pozzolith assures minimum shrinkage, low permeability, increased bond-to-steel, great durability.

These results are obtained with Pozzolith because, through cement dispersion, it is the key to *lowest unit water content*—most important basic factor affecting the quality of concrete. See Bureau of Reclamation's current Concrete Manual, Pg. 130.

Full information on Pozzolith and demonstration kit sent on request.

***POZZOLITH...** reduces unit water content (water required per cubic yard of concrete) up to 15% for a given workability, and fully complies with the water-cement ratio law. Adaptations of Pozzolith permit rigid control of entrained air. Produced in three standard formulations—Normal Pozzolith, High Early Pozzolith and Low Heat Pozzolith—to give, with maximum economy, the results required under varying job conditions.

Non-shrink, ready-to-use
EMBECO PRE-MIXED GROUT
and
EMBECO PRE-MIXED MORTAR
provide these advantages:

- Convenience and ease of use (add only water)
- Time and labor savings
- Assurance of uniformly superior results.

Do jobs like these better with—
NON-SHRINK EMBECO PRE-MIXED GROUT:

Grouting Machinery
Grouting Anchor Bolts
Grouting Building Columns

NON-SHRINK EMBECO PRE-MIXED MORTAR:

Patching Concrete Floors and Steps
Repairing Wall Seams and Cracks
Grouting Around Pipes Through Walls
Repairing Joints of Brick Floors
Tuck Pointing Masonry
Caulking Joints Between Floor Slabs and Basement Walls
Caulking Joints of Bell and Spigot, and Tongue and Groove Pipe
Grouting Steel Sash and Jamb

Write for information and where to buy in your area.

The

MASTER



BUILDERS

Subsidiary of American-Marietta Company

FINE HOMES BEGIN AT THE DOORWAY



Specify the new KWIKSET "600" line and select from a distinctively styled line of fine, precision-manufactured, *unconditionally guaranteed* locksets.

Available in all popular functions and finishes, for finer residential and commercial building.

Write for illustrated catalog.

kwikset
LOCKSETS **600**
LINE

FOR SALES & SERVICE, Kwikset Company, Anaheim, California

NAI*
#674
v.117
pt.1

New economy



Rotary Oildraulic®

THE MODERN
ELEVATOR FOR
MODERN BUILDINGS

Philadelphia International Airport Terminal Philadelphia, Penna.

This splendid new building embodies all the latest ideas and improvements in airport layout and design. Built with an eye to future expansions, it has a very interesting elevator installation: The Rotary Oildraulic Elevator, now serving 3 landings, can later be extended at very little expense or traffic interruption to serve an additional floor. This is possible because this modern elevator is raised and lowered by a hydraulic jack and requires no overhead machinery.

*Architects: Carroll, Grisdale & Van Alen
Consultants: Airways Engineering Corporation
Rotary Oildraulic Elevator installed by:
Security Elevator Co., Inc., Philadelphia, Pennsylvania*



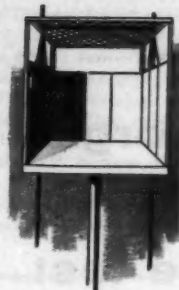
y and efficiency in elevators

Rotary Oildraulic Elevators have these architectural and operating advantages



No costly, unsightly penthouse

Because it's pushed up from below by a hydraulic jack, not pulled from above, the Oildraulic Elevator requires no unsightly penthouse. This permits a saving of several hundred to thousands of dollars, and improves the building design.



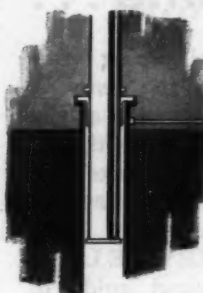
Lighter shaftway structure

There's no need for heavy, load-bearing sidewall supporting columns and footings to carry the car, counterweight, overhead machinery, and the load. The powerful Rotary Oildraulic jack supports the entire system from below.



Flexibility in power unit location

A machine room can usually be dispensed with because Rotary's compact power unit can be located at any convenient spot on any landing and on any side of the hatchway . . . or in an area with other equipment.



Low operating and maintenance cost

As the pump, all valves and the plunger operate in oil at all times, wear is negligible. Motor is used only when car rises—half the usual service. Smooth operation reduces shock and wear. No cables to replace periodically.



New Rotary Development



PATENTED OILDRAULIC CONTROLLER guarantees smooth starts, accurate landings

The revolutionary Rota-Flow oil-hydraulic power system gives velvet-smooth starts and cushioned stops. Oildraulic automatic floor leveling positions the elevator car to each landing with exactness . . . $\frac{1}{4}$ " accuracy guaranteed. The new Oildraulic Controller is a very remarkable device that

handles the functions of seven separate control valves . . . simplifies adjustments and maintenance.

Rotary electric control systems are tailored to exact requirements and any desired type of operation can be furnished. For planning assistance call on our Engineering Department.



OILDRAULIC® Elevators

(FREIGHT OR PASSENGER)

Engineered and built by Rotary, world's oldest and largest maker of oil-hydraulic lifts

SEE OUR FILE IN SWEET'S—For catalog and complete architectural data, write
ROTARY LIFT CO., 1001 Kentucky, Memphis 2, Tenn.

A 90827

In Atlanta, Georgia WROUGHT IRON PIPE stands the test of time . . .

Here's more proof of economical piping with wrought iron. As you can see by the years of service life to date recorded in the arrows at the right, wrought iron pipe has proved more than a match for corrosion in these Atlanta buildings. The result—long-life, maintenance-free installations.







Today's high replacement and repair costs underscore, more than ever, that SERVICE LIFE, not initial costs, is the only sound guide to economical pipe selection. In installation after installation, wrought iron pipe has proved its economy by doubling, tripling and even quadrupling the useful life previously obtained from low-first-cost-piping.

You'll get a good idea how wrought iron has served and saved for others by reading over our bulletin, *Piping for Permanence*. Write for a copy today.

A. M. Byers Company, Pittsburgh, Pa. Established 1864. Boston, New York, Philadelphia, Washington, Atlanta, Chicago, St. Louis, Houston, San Francisco. Export Department: New York, N.Y. Available throughout the world.

BYERS

CORROSION COSTS YOU MORE THAN WROUGHT IRON
WROUGHT IRON
TUBULAR AND HOT ROLLED PRODUCTS
ELECTRIC FURNACE QUALITY STEEL PRODUCTS

54 YEARS		CITIZENS & SOUTHERN NATIONAL BANK BUILDING Erected 1901 SERVICES: Waste lines, soil lines, vent lines, downspouts, house drain (original building)
31 YEARS		BILTMORE HOTEL Erected 1924 SERVICES: All cold water lines
64 YEARS		TRUST COMPANY OF GEORGIA BUILDING Erected 1891 SERVICES: All water supply, drainage and heating system piping
71 YEARS		KIMBALL HOUSE Erected 1884 SERVICES: All water supply and steam heat- ing systems
29 YEARS		SEARS, ROEBUCK and CO. BUILDING Erected 1926 SERVICES: All plumb- ing and heating system piping except drainage
58 YEARS		GEORGIA SAVINGS BANK BUILDING Erected 1897 SERVICES: Hot and cold water lines, heating system lines

ARCHITECTURAL RECORD

January 1955 Vol. 117 No. 1

Copyright 1955 by F. W. Dodge Corporation, with all rights reserved. ARCHITECTURAL RECORD (combined with AMERICAN ARCHITECT and ARCHITECTURE) is published monthly by F. W. Dodge Corporation, 10 Ferry Street, Concord, New Hampshire, with editorial and executive offices at 119 West 40th Street, New York 18, New York. Western editorial office, 2877 Shasta Road, Berkeley 8, California.

STAFF OF ARCHITECTURAL RECORD



H. Judd Payne, Publishing and Editorial Director; John Knox Shear, A.I.A., Editor-in-Chief; Robert F. Marshall, General Manager; Marshall T. Ginn, Circulation Manager. . . Emerson Goble, Managing Editor; Frank G. Lopez, A.I.A., Senior Editor; James S. Hornbeck, A.I.A., Senior Associate Editor; Elisabeth Kendall Thompson, Senior Associate Editor and Western Section Editor (Berkeley, California Office); Robert E. Fischer, Associate Editor (Engineering); Florence A. van Wyck, Associate Editor; Jeanne M. Davern, Associate Editor (News); Daniel M. Kelley, Associate Editor (Engineering Assistant); Ernest Mickel, Dan Street (Washington), John Caulfield Smith, M.R.A.I.C. (Canada): Contributing Editors; Marjorie Blake, Grace M. Anderson, Assistant Editors; Ruth P. Watson, Helen E. Cook, Editorial Assistants; Peter Piening, Consulting Design Director; Eugene H. Hawley, Alfred Petersen, Design; Sigman-Ward, Drafting Consultants; Thomas S. Holden, Industry Relations Consultant; Clyde Shute, Statistical Consultant; George Cline Smith, Economics Consultant; Clifford Dunnells, Jr., Field Research Consultant; Samuel C. Pace, Public Relations Consultant.

TABLE OF CONTENTS

The Record Reports

Perspectives	9
"Center of the Americas." Miami Finds New Support of Old Dream	10, 11
News from Washington. By Ernest Mickel	12, 38
Meetings and Miscellany	15, 16
Periodical Reports	20
Opinion	24
News from Canada. By John Caulfield Smith	26
Construction Cost Index	42
Required Reading	46
Current Trends in Construction	298

Building Types Study Number 218 — College Buildings

It's not exactly news that college buildings are very active, will get progressively more active, no doubt, as the famous crop of wartime babies begin to reach college age, in five or six years. Glancing through this Building Types Study you may get the impression that the biggest news is that college buildings are beginning to show some collegiate erudition.

Campus Development for Illinois Institute of Technology, Chicago, Ill.; Ludwig Mies van der Rohe, Architect 126

The University of Michigan, Ann Arbor, Mich.; Lynn W. Fry, Supervising Architect 132

North Campus Plan, Eero Saarinen and Assoc., Archts.; Central Service and Stack Bldg., Albert Kahn Assoc., Archts. and Engrs.; Addition, Couzens Hall, Ralph R. Calder, Archt.; Addition, Michigan Union, Eberle M. Smith, Archts. and Engrs.; North Campus Apt. Housing, Leinweber, Yamasaki & Hellmuth, Archts.; Proposed School of Music, Eero Saarinen and Assoc., Archts.; Phoenix Project, Giffels & Vallet, Inc., L. Rossetti, Archts. & Engrs.; Automotive Engineering Bldg., Giffels & Vallet, Inc., L. Rossetti, Archts. & Engrs.; Women's Swimming Pool, Lee Black & Kenneth C. Black and Alden B. Dow, Archts.; Children's Hospital; Psychiatric Unit, Swanson Assoc., Inc., Archts.; Kresge Medical Research Bldg., Giffels & Vallet, Inc., L. Rossetti; Skidmore, Owings & Merrill, Archts.; Outpatient Clinic, Giffels & Vallet, Inc., L. Rossetti; Skidmore, Owings & Merrill, Archts.

The Australian National University, Canberra, Australia; Prof. Brian B. Lewis, Consulting Architect 139

Cover: Typical dormitory room, Young, Richardson, Carleton & Detlie, Architects and Engineers

Continued on next page

ARCHITECTURAL RECORD

Continued from page 5

Building Types Study Number 218 — College Buildings (Continued)

Physical Education Center, Northeastern University, Boston, Mass.; Shepley, Bulfinch, Richardson & Abbott, Archts.	142
Oberlin Inn, Oberlin College, Oberlin, Ohio; Eldredge Snyder, Archt.	145
Alms Memorial Bldg., University of Cincinnati, Cincinnati, Ohio; James E. Allan, Archt.-Engr.	146
Men's Dormitory, University of Washington, Seattle, Wash.; Young, Richardson, Carleton & Detlie, Archts. and Engrs.	147

What's New in Dormitories

What's new in college dormitories is, of course, more college kids, more and more of them, with their younger brother expected to follow soon. The FHA has been doing something about it, and a good job, too, judging by what architects say about the program. Here is a quick review of typical buildings by private architects, who were allowed considerable freedom.

151

Glare-Less Daylighting in Hawaii

Hawaiian Life Insurance Co. Building, Honolulu, T. H.; Vladimir Ossipoff, Architect	155
---	-----

Amenity Values in a Small Factory

Additions to Plant of Avery Adhesive Label Corp., Monrovia, Calif.; George Vernon Russell, Architect	161
--	-----

Houses

House for Mr. and Mrs. Harry E. Ormston, McLean, Va.; Harry E. Ormston, Archt.	164
House for Mr. and Mrs. C. B. Fox, New Orleans, La.; John W. Lawrence and Sam T. Hurst, Archts.	166
House for Dr. Clara Tucker, Baton Rouge, La.; John W. Lawrence and Sam T. Hurst, Archts.	168

Architectural Engineering

Feeding college youngsters by the thousands is one of the big tasks that is being handled as big business. Scientific food management has developed a number of ideas that will be important to all architects doing college buildings that will involve any food facilities. This article presents the thinking of several specialists from universities which have instituted modern systems.

Food Service Planning in Colleges	170
Roundup	175
Product Reports: Gymnasium and Library Equipment	176
Office Literature	178
Time Saver Standards — Engineered Wood Design: Plank and Beam Construction. By William J. LeMessurier and Albert G. H. Dietz	181

Index to Advertising

300

OFFICERS OF THE F. W. DODGE CORPORATION

James McV. Breed, Chairman of the Board; Paul Abbott and Thomas S. Holden; Vice Chairmen of the Board; Howard Barringer, President; Irving W. Hadsell, Chauncey L. Williams; Executive Vice Presidents; Howard M. Thompson, Vice President and Treasurer; Julius T. Little, Robert F. Marshall, T. Oliver Morgan, H. Judd Payne; Vice Presidents; Carl S. Bennett, Ralph M. Hairston, O. O. Paulsell, Richard H. Ray; Regional Vice Presidents; Edwin H. Freed, Assistant Vice President and Comptroller; George Cline Smith, Assistant Vice President and Economist; Walter F. DeSals, Clifford G. Dunnella, Jr., Clyde Shute, Marc Wayne; Assistant Vice Presidents; Sanford D. Stockton, Jr., Secretary; William C. Breed, Jr., George W. Morgan, Jr.; Assistant Secretaries; Irving B. Satin, Assistant Treasurer.

OTHER F. W. DODGE SERVICES:

Dodge Reports and Dodge Statistical Research Service — Sweet's Files — "Planning Kit for Our New Home" — Chicago Construction News — Daily Pacific Builder — Denver Daily Journal — Real Estate Record & Builders' Guide.

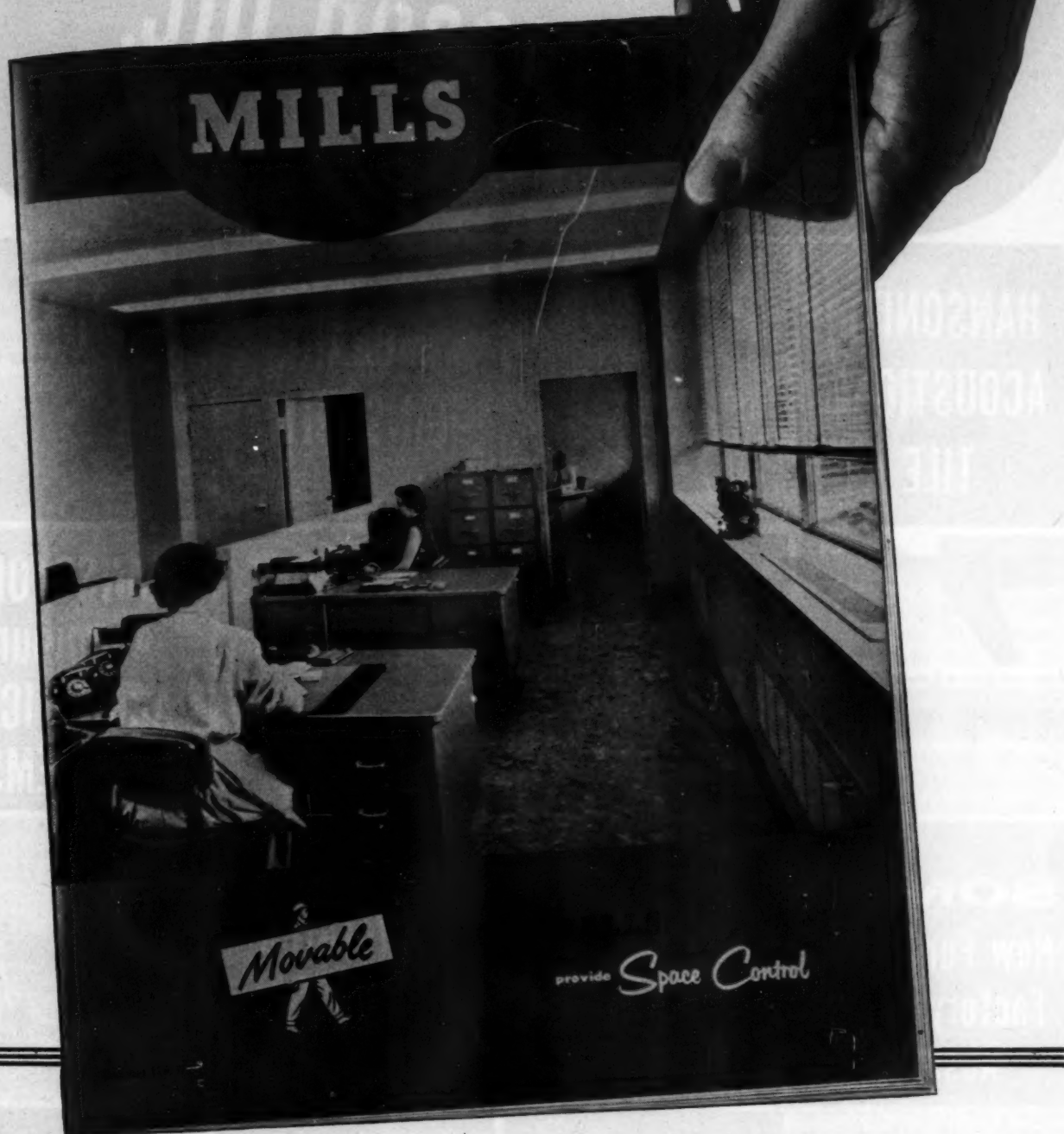
Member of Audit Bureau of Circulations and Associated Business Publications. Architectural Record is indexed in Readers' Guide to Periodical Literature, Art Index, Industrial Arts Index and Engineering Index.

Every effort will be made to return material submitted for possible publication (if accompanied by stamped, addressed envelope), but the editors and the corporation will not be responsible for loss or damage.

Subscription rates in U. S., U. S. Possessions, and Canada: \$5.50 for one year, \$9.00 for two years, \$11.00 for three years. Elsewhere, subscriptions from those who by title are architects or engineers, \$6.50 for one year, \$11.50 for two years, \$15.00 for three years; subscriptions from all others outside U. S., U. S. Possessions and Canada, \$20.00 a year. Single copy price, \$2.00. Circulation Manager: Marshall T. Ginn. Change of Address: Subscribers are requested to furnish both old and new addresses, sending if possible the stencil impression from magazine wrapper. Allow four weeks for change.



This book shows you how
to get **SPACE CONTROL**



Write for this new 68-page
catalog or see it in
Sweet's Architectural File

MILLS
Movable
METAL WALLS

● Mills Walls give you *Space Control*, the ability to adapt your space readily to changing space requirements. They *promote efficiency*—enable you to get maximum productivity through the most effective use of space. Mills Walls *are economical, too*—can be moved at low cost, overnight or over a week end, without interrupting normal routine—require no maintenance except occasional washing. Thoroughly sound-proofed, Mills Walls combine distinctive architectural design with structural stability—are as attractive and modern as they are efficient.

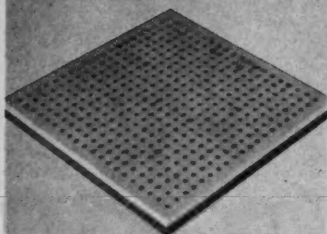
THE MILLS COMPANY • 901 Wayside Road • Cleveland 10, Ohio

an exclusive line of acoustical control systems

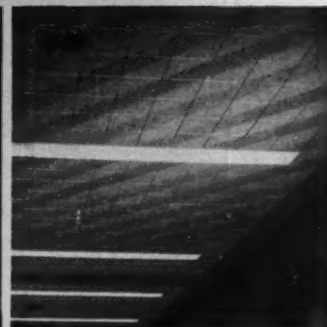
ELOF HANSSON, INC.

for perfect sound control in business and industry

HANSONITE*
ACOUSTICAL
TILE



MOSAIC
HANSONITE*



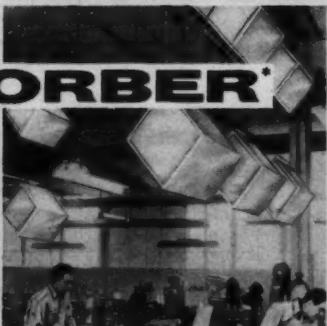
Tongue and Groove ↑ Makes Tight Seal ↓

HANSONITE*
Tongue & Groove
TILE

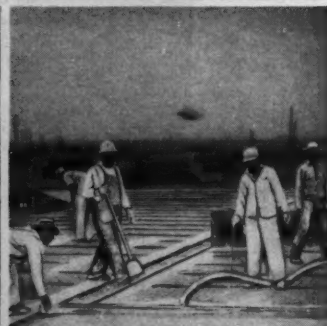


HANSOTONE*
Aluminum
ACOUSTICAL
SYSTEMS

SONOSORBER*
New Functional
Factory Sound
Absorber



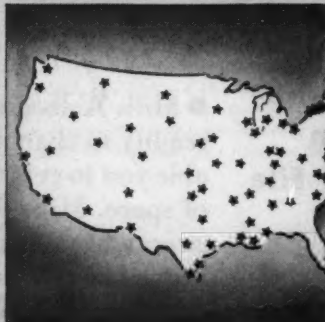
HANSOTONE*
Perforated
ACOUSTICAL
FORMBOARD



INCREASED
EFFICIENCY



Sound Research
Sound Experience
Sound Service



Distributors
in 65 cities
U. S. & Canada

ELOF HANSSON, INC.

220 EAST 42nd STREET, NEW YORK 17, N. Y.

* REG. U. S. PAT. OFF.

THE RECORD REPORTS

P E R S P E C T I V E S

ASHVE TO ASHACE: The American Society of Heating and Ventilating Engineers has voted to change its name to American Society of Heating and Air-Conditioning Engineers Inc.

ATOMIC POWER will fuel half the electric power plants being built by 1976, President Ralph J. Cordiner of General Electric told the recent 59th annual Congress of American Industry. Mr. Cordiner said the survival of freedom is likely to depend on the kind of planning business men do and especially on whether they have the imagination to convert atomic fission from "our major source of fear into one of our major sources of fuel energy in the next century." The development of "automatic factories" was seen by Mr. Cordiner as another potential for raising living standards and increasing freedom. Defeat of the Soviet challenge, Mr. Cordiner said, can best be achieved by developing "a philosophy, a program and a passion" toward a richer life for all mankind.

CONSTRUCTION LEADS THE U. S. in number of new businesses formed, according to the latest report by the U. S. Department of Commerce. The Department's study of the U. S. business population covering the year 1953, and released late in 1954, showed the contract construction industry added 14,000 more companies between January 1 and December 31 of 1953, an increase of about three per cent and the biggest of any business category. Of the U. S. total of 4,185,300 businesses, 466,667 were recorded for construction.

YOUNG IS A CIRCUMSTANCE: The advent of a new year seems to offer a suitable occasion for quoting the dean of American architects on the

subject of old age. The following essay appeared under the byline of Frank Lloyd Wright in the very interesting 1954 annual report of the New York State Joint Legislative Committee on Problems of the Aging: "It seems to me the best thing ever said concerning old age was said by Oscar Wilde: 'The tragedy of old age is that it is not old.' As an experienced builder of homes I should say that most needed by the aging is more realization that young is a circumstance and youth is a quality. And more needed is less accent by society on maturity as a disability. If it is not an asset, then our civilization passes into failure. Also — no retirement, less segregation; rather more privileges as reward for wisdom and achievement. In short, age should be treated as a qualification that ought to be — not as now, be a disqualification. Also, I think old age needs a greater range of activity, not less, and needs more rewards of the kind development covets. Like for instance, a beautiful environment — the high quality we call a work of art in nearly everything from here to heaven." At 85, Mr. Wright has just announced that the adverse decision of a Wisconsin tax court will make it necessary for him to abandon Wisconsin and the Taliesin Fellowship (rudely described in court argument as his "design business"). He has opened a new "office" at the Hotel Plaza in New York.

DON'T ANYBODY make a mistake about this: In the automotive field "styling" and "design" are two separate procedures. One of the auto manufacturers explained this very carefully, said it had been a source of much confusion. "Styling" and "Body Engineering" are in fact two different buildings. A car body is

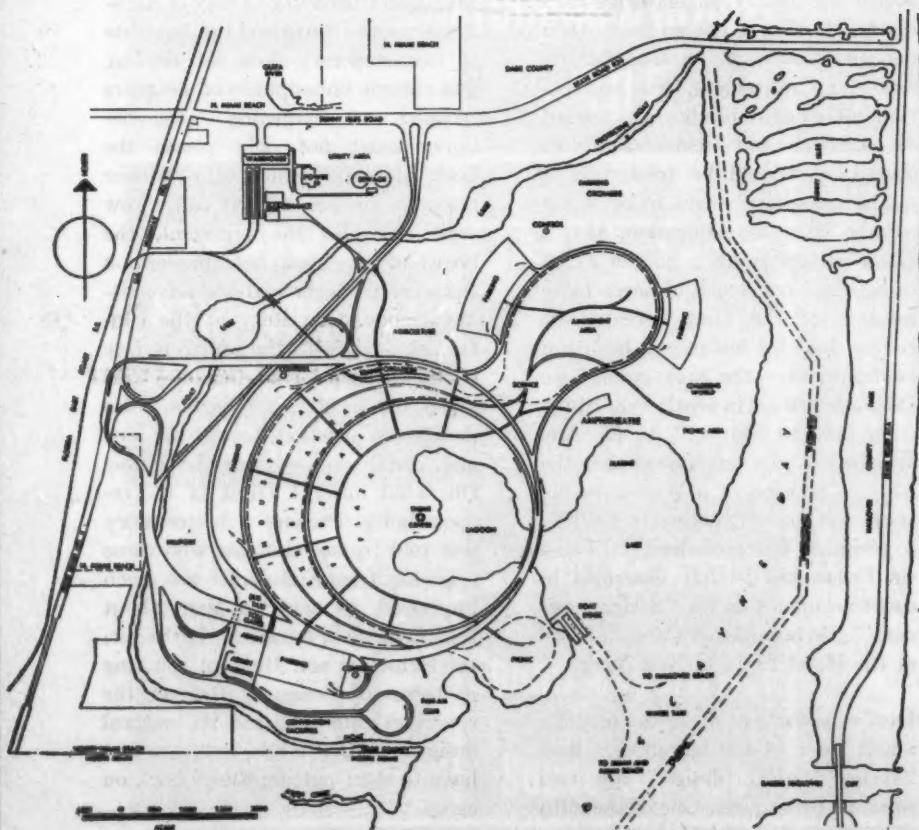
designed by Body Engineering, then the design goes to Styling where the important work is done. The two departments are not presumed to have any business in common; if a clash should develop, it is referred to top management, but this is sort of academic — in practice it would be rare, so well are the two functions understood.

AUTO DESIGNERS joined with other designers serving the mass market at the recent Ann Arbor Conference, sponsored jointly this year by the Michigan University College of Architecture and Design and the Institute of Contemporary Arts, of Boston. The chronic unhappiness of designers cropped out frequently — the designer must not only please the fickle public (beware of consumer research, by the way, it can throw you) but also the president, the board of directors, not to mention the sales manager and the advertising agency. One story at the conference dealt with the unhappy fate of the designer who for once was given his head: no opposition, no doubts, no question; he was the boss and could do anything he chose. Oh, what misery! Think of the responsibility. Perhaps a better story was told by one designer who came originally from Europe. He was much impressed, he said, to learn about that favorite of American burlesque, the striptease act. He kept thinking in terms of design — after all the coverings come off, and the natural design is all that is left, well, you just have to start putting things back on again.

LET'S HANG TOGETHER is the title of the monthly news sheet published by the National Metal Awning Association.



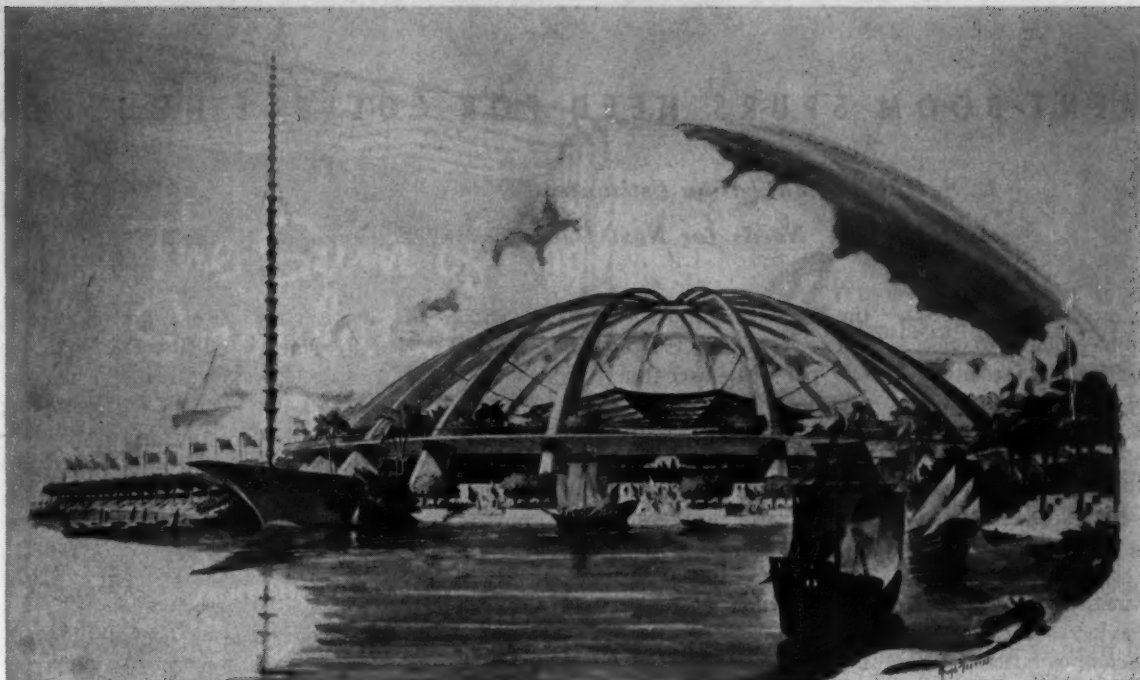
"CENTER OF THE AMERICAS":



Although members of the Board of Design emphasize that they have been concerned with basic concepts and not even preliminary building designs, the renderings by Hugh Ferriss hint at architectural themes to be developed. Top of page: overall view; across-page top, "theme center"

A \$200 MILLION PERMANENT EXPOSITION and recreation center on an 1800-acre site ten miles north of Miami is now proposed by Florida's Inter-American Center Authority as a new and expanded version of Miami's perennial dream of creating a center of trade and cultural relations for the western hemisphere. Financing is still to be found: but two New York investment houses, Lehman Brothers and Van Alstyne Noel, have agreed to underwrite the public offering of the requisite initial \$60 million bond issue next spring; and the project has received high marks for commercial feasibility in the report by Ebasco Services Inc. of New York on an intensive business study.

Architects have played a key role in developing not only planning and design concepts to implement a program but the basic program itself. Early in 1950 Dr. D. H. Walker, chairman of the Authority and very much the genie of the project, asked Robert Fitch Smith, then president of the Florida South Chapter of the American Institute of Architects, to name an advisory group of architects. The resulting Architectural Board of Design has worked closely with the Authority ever since and now begins the intensive phase of basic design; it is also expected to function as a board of control to review the work of other architects who may be commissioned to design individual exhibition buildings.



MIAMI PLUGS NEW VERSION OF A BIG DREAM

Members of the Board are: Russell T. Pancoast of Miami Beach and Alfred B. Parker, John E. Petersen, Robert Fitch Smith and Robert Law Weed, all of Miami; associate architects are: William K. Jackson of Jacksonville, Arthur Gale Parish of St. Petersburg and James Gamble Rogers of Winter Park. Hugh Ferriss of New York has been associated with the Board in visualizing the developing concepts of the project. Mr. Smith has served as Board chairman.

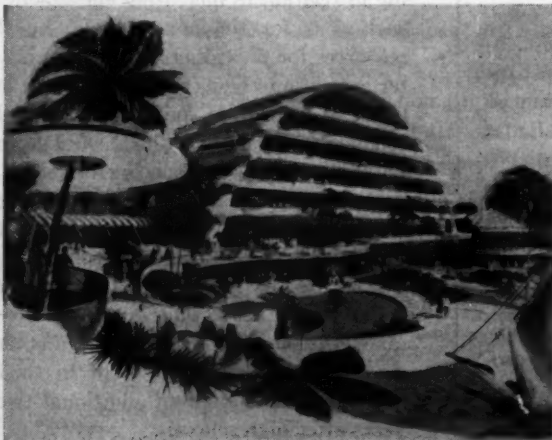
The center is regarded by the architectural board as an unparalleled opportunity for a regional architectural expression indigenous not only to the site itself but to the areas from which many of the Latin American visitors will come. The setting is envisioned as a

subtropical garden with a "theme center" consisting of a lagoon area with a multipurpose amphitheater surrounded by circular levels of exhibition buildings. A canal system will wind through the grounds as the lowest of three levels of circulation, with sidewalks on the next level and roadways on top; buildings will be between the sidewalk and roadway levels, permitting them to be viewed from either one.

A simple human fact — that touring feet get tired — and an economic one — that exhibitors must be satisfied their displays will be seen by the maximum number of people — have been dominant in the evolution of the circular plan and other basic concepts. Item: a one-way road system will pass all exhibition

buildings and "points of interest" so motorists get an overall view before parking. Item: resting places will be located not in vacant spaces but within view of the exhibitions. Item: relationship of gardens, buildings and walkways will be planned to give the weary visitor as little "not one more building!" feeling as possible.

Estimating an average annual attendance of 10 to 12 million, Ebasco forecasts an annual operating profit of \$20 million. On the basis of the experience at recent World's Fairs, Ebasco recommends shorter hours (only one shift of employees) and design of facilities for much lower peak attendance — 100 per cent instead of 600 per cent above the anticipated daily average.



ENROLLMENT BOOM SPURS NEED FOR COLLEGE HOUSING

U. S. Office of Education Estimates Present Backlog

At \$6 Billion, Needs for Next Decade at \$2 Billion

COLLEGE HOUSING CONSTRUCTION costing \$6 billion would be required to erase the present backlog of need, according to the latest estimates by the U. S. Office of Education. Just to cope with enrollment increases of the next decade, without respect to obsolescence, is estimated to require expenditures for construction averaging \$200 million a year.

An even greater expenditure would be required to enable institutions of higher learning to meet the increasing demand by students for on-campus housing and to replace substandard housing presently in use. A steady decline in the number of students housed in private homes is being noted; and while only 26 per cent of today's students are housed by the colleges and universities, the Office of Education believes the demand might reach 50 per cent by 1965-70. And 13 per cent of the students housed on-campus today live in "temporary" dormitories erected to meet the post-World War II rush to the colleges under the GI Bill of Rights.

Estimated enrollment for 1965 is 3.5 to 4 million, or a whopping 94 per cent over the pre-1941 figure. Actual figures place the 1954-55 enrollment at the all-

time record high of 2,472,000 students, ten per cent over 1953 and six tenths of one per cent over the previous high reported in 1949.

Commenting on Fall 1954 enrollment figures, Dr. J. Kenneth Little, deputy commissioner of education, noted that college and university enrollments showed an increase for the third consecutive year. "Except for the years immediately following World War II, when large numbers of veterans were attending college under the GI educational benefits, the ten per cent increase in number of students this fall over last fall is the largest single-year increase since the mid-Thirties. The estimated 636,000 new students enrolled this fall [1954] is the second highest enrollment of new students in the nation's history."

One out of three of these students lives on campus; the other two out of three either live at home or compete in declining numbers for the private housing that is becoming less and less easily available in campus vicinities.

Back in 1947 the Office of Education and the Federal Works Agency conducted a study of higher education facilities. This turned up 119 million sq

ft of residence space. Two thirds of it was for single students, one sixth for married and one eighth for faculty occupancy. Later, a check on a sampling basis indicated that 95,559,000 additional sq ft were required, or 80 per cent of the total square footage then available.

Between mid-1951 and mid-1953, colleges built living space for 66,715 students. The cost was placed at \$207,338,888 or \$3108 per student.

One spokesman said that all the housing constructed at colleges and universities since 1947 fails to go beyond the urgent and emergency needs as expressed in that year. That was when the authorities were predicting declining enrollments.

If \$2 billion worth of college housing can be erected in the next 10 years, and the enrollment estimate of 3.5 to 4 million students in 1965 is substantiated, the Office of Education believes about one half of the anticipated enrollment increase could be housed in new structures, though it doubts the percentage of total students being housed could be significantly increased. Even excluding needs forced by obsolescence, the outlay of \$200 million per year will be required to provide adequate housing for 25 to 30 per cent of anticipated enrollments.

Financing is, of course, the key to how much of the needed construction can be accomplished; and on this point the Office of Education warns that unless new resources for financing are developed there will, in fact, be less institutionally owned and operated housing in relation to increasing enrollments each year for the next decade. Local resources for providing the needed shelter are close to being exhausted, say the Office of Education spokesmen. Federal scholarships, a part of which could go to building purposes, are being talked of. Any diversion of scholarship funds for construction now is prohibited. Student migration is still another problem to complicate the building picture. Junior colleges are being suggested in some quarters as a possible temporary answer since students would be kept in their own home towns for an additional two years after high school.

(More news on page 15)

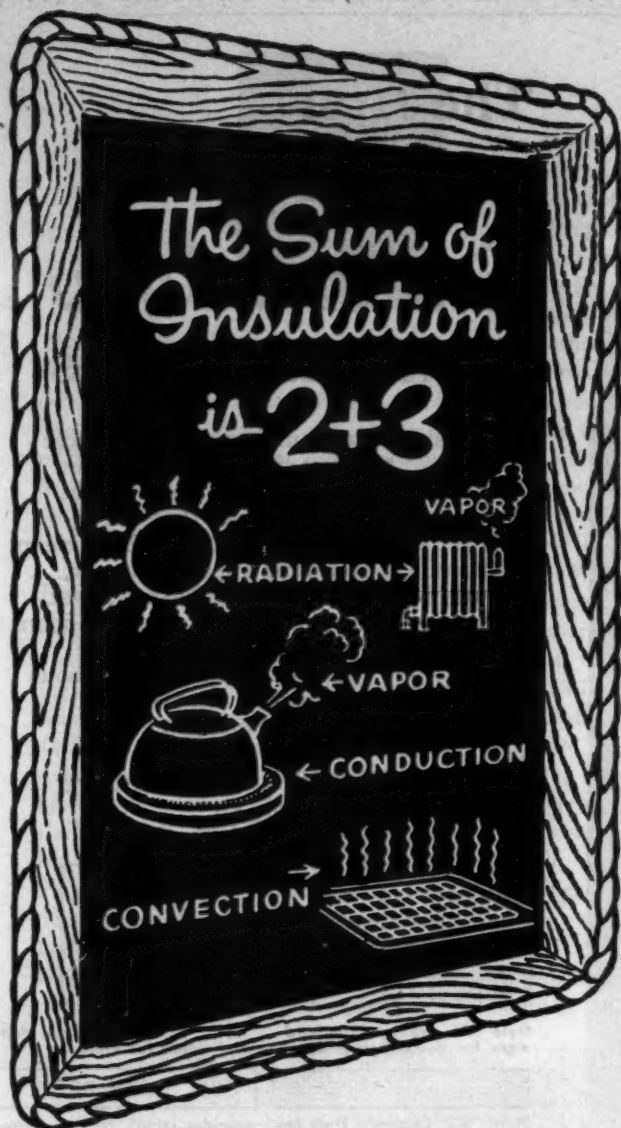
EDUCATOR WARNS: EXPANSION IS NOT ENOUGH

STATES must apply to the development of facilities for higher education the kind of comprehensive long-range planning local communities now bring to consideration of elementary and secondary school needs, according to Dr. John Perkins, University of Delaware president.

Writing in the October 1954 issue of *State Government*, Dr. Perkins notes that the anticipated 70 per cent increase in college-age population by 1970 implies an enormous expansion of facilities: "It has been estimated that in the next 15 years as much floor space will have to be provided for higher education as was built in the 300 previous years."

But the Topsy-like growth of the past will no longer be tolerable: "To

make it financially possible for the commonwealths to fulfill their responsibility to the larger student bodies of the future, the entire state structure of higher education should be subjected to the closest scrutiny and, when needed, generally overhauled." Overlapping and duplication of programs at several institutions within a state probably can no longer be afforded; on the graduate and professional level inter-state co-operation may be required. Existing organizations in the South and the Rocky Mountain area are cited as examples of regional coordination; Florida and Illinois are given as examples of states which have already established long-range planning programs.



COST OF EDGE-TO-EDGE INFRA
Multiple Aluminum Insulation
installed in new construction between
wood joists, material with labor

Type 6-S under 9½¢ sq ft.

Type 4-S under 7½¢ sq ft.

Infra Insulation, Inc., 525 B'way., N. Y. C. Dept. R-1
Please send sample of new insulation ☐; Bureau of
Standards Report "Moisture Condensation in Building
Walls"—BMS63 ☐; Description of new insulation ☐.

Name _____

Firm _____

Address _____

INFRA INSULATION, INC., 525 Bway., New York, N. Y.

FIVE-WAY protection is required of an insulation against (1) CONDENSATION, (2) VAPOR FLOW, as well as against Heat Flow by (3) RADIATION, (4) CONDUCTION, (5) CONVECTION.

Multiple accordion aluminum provides this 5-fold protection. It is pre-fabricated to automatically create a "blanket" of multiple alternating layers of air, aluminum and fiber as it is installed.

Against RADIATION there is high (97%) reflectivity, low (3%) absorptivity and low (3%) emissivity for heat rays. CONDUCTION is low because of preponderant compartmented air spaces of low density. CONVECTION, outer and inner, is retarded by multiple layers of aluminum and fiber.

CONDENSATION MINIMIZED

The aluminum sheets are almost completely impervious to water vapor. Infiltration under flat, stapled flanges is slight. The scientific construction of multiple layers of accordion aluminum, fiber and air spaces minimizes condensation on or within this insulation. Its slight mass produces little heat storage.

To obtain MAXIMUM, uniform-depth protection against heat loss and condensation formation, it is necessary to use the new edge-to-edge multiple aluminum*, each sheet of which stretches from joist to joist, and also all through the flanges for further vapor protection as well as permanent attachment of each sheet.

The U. S. NATIONAL BUREAU OF STANDARDS has published an informative and authoritative report on "Moisture Condensation in Building Walls." This booklet explains the conditions under which condensation will take place in insulated as well as un-insulated walls; what part is played by effective vapor barriers such as metal foils; how to use and interpret thermal-resistance and vapor-resistance fractions. You can obtain it at our expense by sending us the coupon.

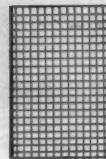
*Patent applied for.



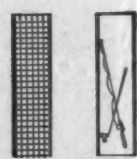
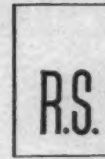
The first new...all-new "Custom" door at standard prices

An outstanding example of the "Kawneer Touch" . . . the new all-welded aluminum door can be "customized" to your needs. Now you can specify a door that is 10% stronger than similar doors, provides a clean, seamless, eye-appealing appearance, and features interchangeable hardware . . . yet the cost compares with other standard doors. Here is the only stock door that can be styled to any type of store. Learn all about it now. See your Kawneer dealer or write Kawneer, Niles, Michigan.

Now! —identification hardware
"individually designed"



Style "M": Cosmopolitan hardware for double-acting doors.



Style "B": Coronet "Pull Handle" ideal for symbol.



J. L. JONES, PROP.

Style "B": Coronet "Push Bar" provides length for full name.

Kawneer offers a choice of four different styles of hardware. The two styles shown have interchangeable face plates. If you wish a face plate to identify any type of business or name, all you do is have artwork prepared. Kawneer will laminate it in plastic, etch it on aluminum, or produce it on any material you desire and in any color. The cross-hatch plate is then merely replaced right on the job with the new design.

**Completely welded construction
for greater strength—lower cost**

- 10% stronger than most doors
- New "deep-weld" penetrates metal 100%
- Hairline joints and unblemished finish for attractive appearance
- No exposed, unsightly screws
- Seamless tubular frame construction
- Long lasting beautiful aluminite finish





Aluminum angels heralded Christmas in Rockefeller Plaza this year. The 9-ft figures, designed by sculptress Valerie Clarebout, had brass trumpets and aluminum robes and wings sprinkled with tiny light bulbs. Architect Robert I. Carlson is in charge of the Center's yearly display

Hard Work at Palm Beach

FOR AN OCCASION billed as a "fun convention" — and held against the alluring background of the fabulous new resort La Coquille at Palm Beach — the 40th annual convention of the Florida Association of Architects was a pretty hard-working affair. Most important of the proposals acted on were two which represent major steps in the effort by Florida architects to take the lead in development of closer cooperation in the building industry. One of these, embodying recommended bidding procedures, was adopted by the convention on

the recommendation of the Joint Co-operative Committee of the F.A.A. and the Associated General Contractors. The other, representing an effort by a joint architect-engineer committee to provide a basis for agreement on areas in which architects and engineers might admit each other as prime design professionals, is to be sent all members for further study and comment before consideration by the Executive Committee at its next meeting. Clinton Gamble of Gamble, Pownall and Gilroy, Fort Lauderdale, was elected F.A.A. president to succeed Igor Polevitzky of Miami; Edgar S. Wortman of Palm Beach is the new secretary-treasurer. In the large and varied architectural exhibit held at the Norton Gallery in West Palm Beach, award-winners were Robert M. Little and Watson & Deutschman; William B. Harvard, architect, Blanchard Jolly, associate; Paul E. Kohler Jr. and David Shriver; and (for scale models) Alton C. Woodring Jr., (for delineation), J. N. Smith, and (for ink-traced working drawings) Philip Julien.

Public Relations In '55

A TEACHERS MANUAL and a film strip figure in the A.I.A.'s public relation pro-

gram for 1955. The manual, "At Home With Architecture," was prepared to help elementary and junior high school teachers in the presentation of architecture; it was produced by the A.I.A.'s Public Relations Committee, the Octagon staff and Ketchum Inc., public relations counselors to the Institute. The film strip, "Architecture — U.S.A." will include colored slides of contemporary American architecture, and is now being edited by architect Ralph Myers, of the Kansas City firm Kivett and Myers, on the basis of his research under the Brunner Scholarship. Members of the A.I.A.'s public relations committee include John Root, chairman, Chicago; William Stephen Allen, San Francisco; Karl F. Kamrath, Houston; Harold Sleeper, New York; Harold Spitznagle, Sioux Falls, S. D.; G. Thomas Harmon III, Columbia, S. C.; Leon Chatelain Jr., Washington, D. C.; and the Institute's executive director, Edmund R. Purves.



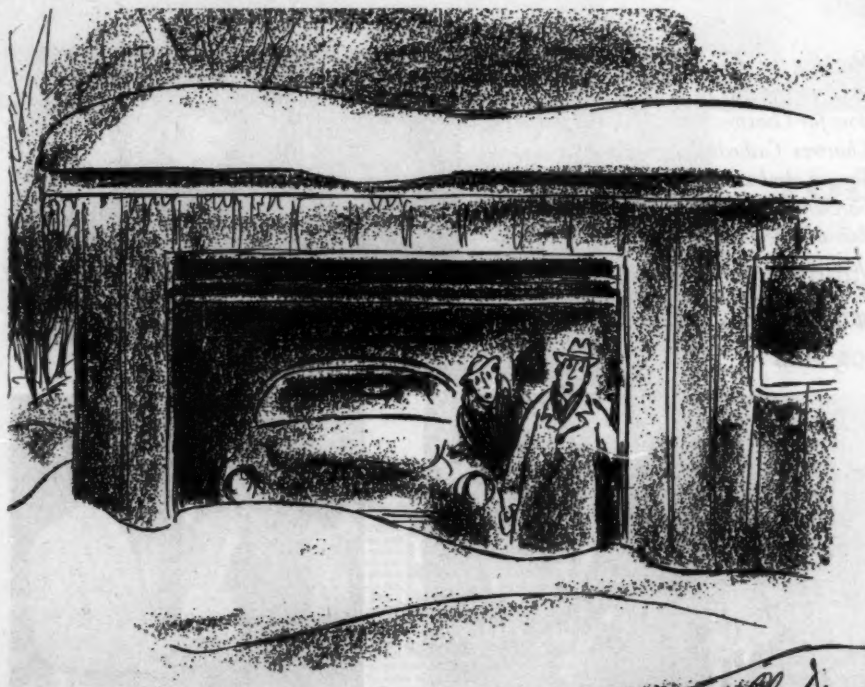
With the A.I.A.

EDWIN BATEMAN MORRIS JR. has been appointed Director of the Department of Public and Professional Relations of the American Institute of Architects. Mr. Morris comes to the A.I.A. from the Public Health Services' Division of Hospital Facilities, where he was assistant to Marshall Shaffer, chief of the Technical Services Branch. He assumed his new duties at the beginning of this month. The previous incumbent was Harold D. Hauf, who left the Institute to become head of the Department of Architecture at Rensselaer Polytechnic Institute.

1955 Honor Awards

SIMPLIFIED ENTRY REQUIREMENTS are part of the A.I.A.'s 1955 Honor Award Program — judgment will be made on

(Continued on page 16)



—Drawn for the RECORD by Alan Dunn

"Well, there goes our new electrically-heated driveway! I forgot how whenever it snows the power lines go out."

THE RECORD REPORTS: MEETINGS AND MISCELLANY

(Continued from page 15)

photographs and other material fixed in transparent binders, eliminating the requirement for presentation boards for preliminary submissions. This year's program is open to buildings of all classifications completed since January 1, 1950. A \$10 registration fee must be submitted before Feb. 15, 1955, while the deadline for material is April 1. Information is available from the Committee on Honor Awards, The American Institute of Architects, 1735 New York Avenue, N.W., Washington 6, D. C.



TOPPING-OUT CEREMONIES:

Flag-raising for (above) Mid-America Home Office Building, Prudential Insurance Company, Chicago — Naess and Murphy, architects; George A. Fuller Co., builders. Left: tree-raising for Mariland Medical Center, Newark, N. J. — Ziegler, Childs & Paulson, architect; Walter Kidde Constructors



Saludos, Amigos

THE 1955 Architects' Trek "Round South America" is scheduled to visit Panama, Peru, Chile, Argentina, Uruguay and Brazil; trekkers will meet their fellow architects in each of these countries. The trip, which will be led by Clyde C. Pearson, regional director of the A.I.A.'s Gulf States District, was arranged, as usual, by the United Travel Agency; the travelers will leave Miami on February 1 and the trek will end a month later at the same place. Already planning to go on the trip: Cecil C. Briggs, Peoria, Ill.; Mr. and Mrs. Kenneth Black, Lansing, Mich.; Mr. and Mrs. J. A. Brennan, Miami Beach, Fla.; N. W. Overstreet, Jackson, Miss.; Mr. and Mrs. Jerome L. Schilling, Miami Shores, Fla.; Mr. and Mrs. Fred B. Dudley, Great Falls, Mont.; Mr. and Mrs. Gerald A. Barry, Chicago; and Mr.

and Mrs. Pearson. The A.I.A. hopes to sign up a total of 20 or 30 architects and their wives.

Scholarships and Contests

THE Rotch Travelling Scholarship, open to American citizens who have studied or practiced in Massachusetts, will be awarded this April for the 66th year; information is available from William G. Perry, Secretary, Rotch Travelling Scholarship Committee, 955 Park Square Bldg., Boston 16, Mass. . . . The Cranbrook Academy of Art, at Bloomfield Hills, Mich., is offering four scholarships of \$1320 each to architects as well as to other artists and craftsmen; applications are due March 1. . . . Graduate fellowships offered by the University of Pennsylvania include the Albert Kahn Memorial Fellowship, \$1100; Ellen L. Matlock Fellowship, \$1200; four Theophilus Parson Chandler Fellowships, each for \$1200; three Graduate Tuition Scholarships, each \$700; the Albert F. Schenck Memorial Traveling Fellowship; and a number of graduate assistantships in the history of art; applications should be addressed to the Dean of the School of Fine Arts at Philadelphia 4. . . . Princeton University announces the following architectural scholarships for the academic year 1955-56: Voorhees Walker Foley

and Smith Fellowship, \$2000; Emil Buehler Foundation Fellowship, \$1500; Lowell M. Palmer Fellowships, each \$1100; Henry N. Young III Scholarship, \$500; D'Amato Prize, \$500; assistantships in instruction and in research, each \$1500; applications should be made before March 1 to the Secretary, School of Architecture, Princeton, N. J. . . .

The Kansas Team (Contd.)

THE SIXTH ANNUAL MEETING of the Kansas Builders Forum, an organization composed of members of the American Institute of Architects, Associated General Contractors, the Master Plumbers Association and the National Electric Contractors Association (ARCHITECTURAL RECORD, September 1954, p. 16), was held in Topeka at the end of September. Delegates to the two-day meeting participated in discussion groups covering various angles of the architect-contractor relationship; each of the component organizations also held its own meeting. Awards for good design and construction were made to six architect-contractor-client teams. Contractor Clarence Vollmer was elected to succeed Charles L. Marshall, A.I.A., in the presidency. Other officers elected were Roy Calvin, A.I.A. — vice president; and P. A. VanEs — treasurer.

(More news on page 20)

Marking the American Institute of Architects' recent gift of a stained glass window for Chartres Cathedral, the A.I.A.'s Chartres Cathedral committee presented French Ambassador Henri Bonnet with a parchment bearing a tribute from American architects to the builders of the cathedral. Right: A.I.A. president Clair W. Ditchy, Julian Levi, Harold B. Willis, M. Bonnet and Ralph Walker



At the convention of the Structural Engineers of California, left: new officers Charles M. Herd, Sacramento—vice president; G. A. Sedgwick, San Francisco—president; and James L. Stratta, San Francisco—secretary. Right: Lynn Beedle, Assistant Director of the Fritz Laboratory at Lehigh University and Harold King, the retiring president



Contractors
O'Brien & Fortin, Inc.
New York City

Architects:
D. Everett Ward
Dwight James Baum
Otto Eggers
New York City

In 1940
Lehigh Mortar Cement
was used in the
construction of the

American

Institute of

Architects'

Administration & Library Building
in Washington, D. C.



Lehigh meets the most rigid
mortar standards.

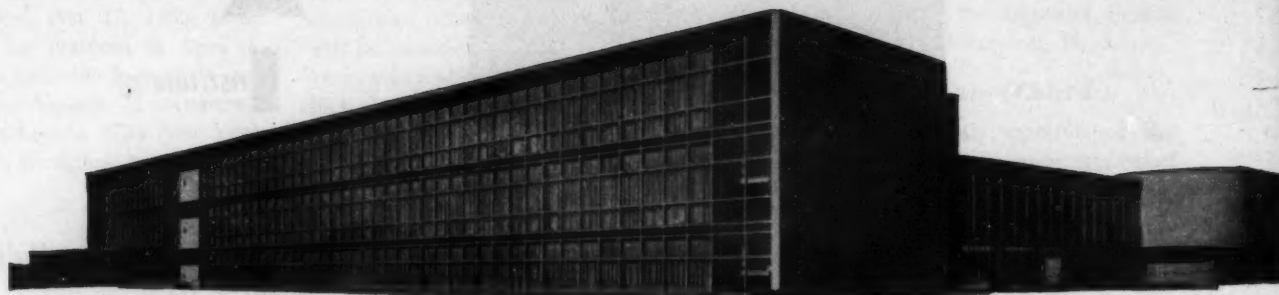
U. S. Government Specification
SS-C-181c, Type I and Type II.
ASTM Specification C 91—53,
Type I and Type II, which in-
cludes the autoclave test for
soundness.



TODAY—The clean,
weathertight walls of this attractive
building show the results of good
design, good workmanship,
and good materials.

LEHIGH
PORTLAND CEMENT CO.
Allentown, Pa.

LEHIGH PORTLAND CEMENT
LEHIGH MORTAR CEMENT
LEHIGH EARLY STRENGTH CEMENT
LEHIGH AIR-ENTRAINING CEMENTS



ST. PATRICK'S ACADEMY, Chicago.
Architects: BELLI and BELLI, Chicago.

173 modern doors with **RIXSON**





concealed closers

*Entrance doors and all interior room doors.
Vestibule, stairwell, cafeteria, gymnasium, classroom,
toilet and all doors leading from the corridors.*

THE OSCAR C. RIXSON CO.

9100 w. belmont ave. • franklin park, ill.

**The startling simplicity of
modern architecture . . .
unmarred by exposed
arms and mechanisms**

Only by the smooth, quiet, automatic door closing action is there any evidence that these doors are equipped with closers. The trim lines . . . especially those of the handsome flush, wood doors . . . are unbroken by any protruding arms or exposed bulky mechanisms.

And there are many functional advantages of firmly installing these closers in the rigid floor. They are out of the way . . . cannot be tampered with, work loose, or gather dust or dirt. RIXSON floor type closers cost no more installed and are simple to adjust and maintain.

There is a size and style of RIXSON closer for every door closing need, from the heaviest entrance door to the light interior room door.

It's the modern trend to . . .

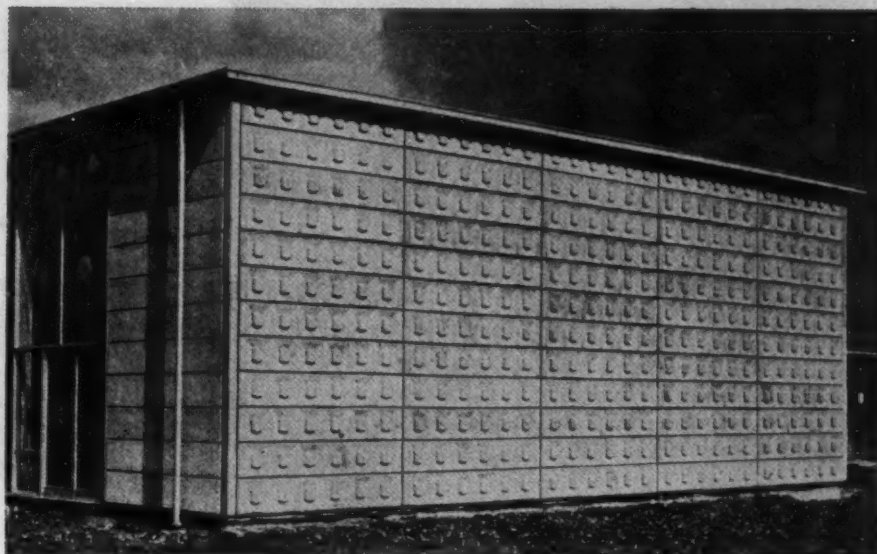
*"Conceal the closer and expose
the beauty of the door".*

specify **RIXSON** throughout

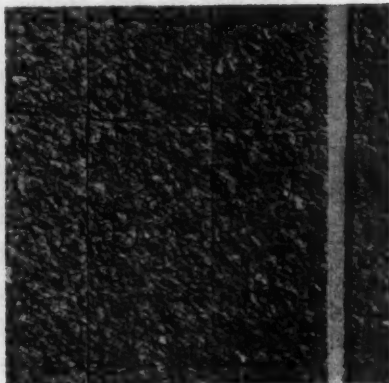
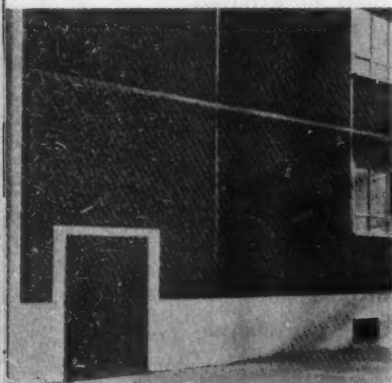


THE RECORD REPORTS: VIEWS OF RECENT PERIODICALS

ARCHITECTURAL DESIGN, November 1954. This issue of the British monthly is devoted entirely to the problem of cladding framed buildings. Architect Edward D. Mills, the issue's guest editor, contributes an introduction in which he reviews recent strides made in the utilization of new light materials for cladding. He also discusses new developments in heavier traditional materials. The introduction is followed by a number of case histories covering the use of stone, brick, slate, concrete, ceramics, timber, asbestos and glass. In the next issue of the magazine the uses of aluminum, steel, plastic and glass curtain-wall techniques were to be studied. Right: molded pre-cast concrete blocks are bolted to steel clips hooked on to steel frame; school in Hertfordshire, C. H. Aslin, architect

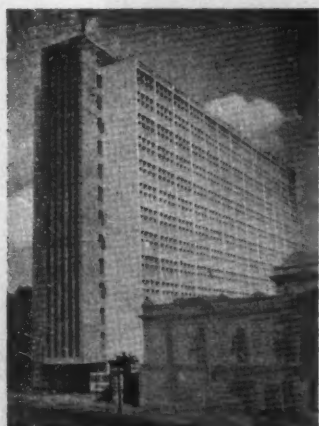
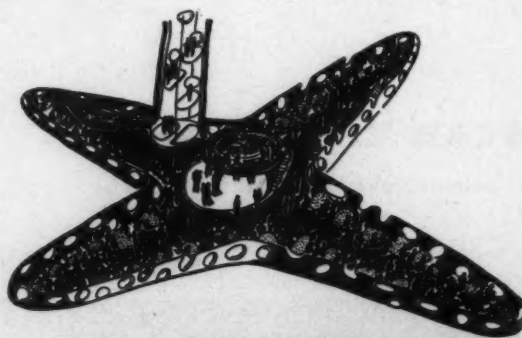


BYGGMÄSTAREN, B2, 1954. Cladding again — this time in a discussion of the finishing of concrete surfaces; the Swedish journal provides an English translation of the article by J. G. Wilson, who suggests that the dull gray appearance of concrete buildings can be avoided by the use of aggregate finishes, which give a variety of possibilities in the way of textures and colors. Other suggestions for varying the pattern of a concrete wall include the use of slabs of different sizes and of patterned slabs. The author also maintains that rough aggregates are more resistant to weathering. Elsewhere in the article he discusses the problems of fastening slabs. Left: photos of British example of the use of aggregate finish; Henning & Chitty, architects

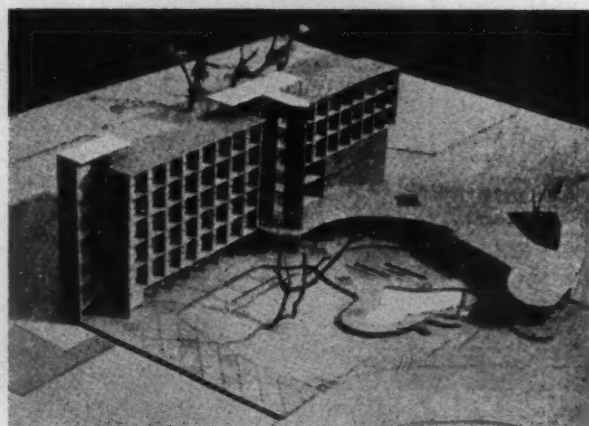


L'ARCHITECTURE FRANÇAISE, Nos. 147-148.

For those who like the drama but not the exertion of deepsea diving, French architect J. Ph. Valois has designed a bar to be built under the Mediterranean. A vertical passenger conveyor belt will carry visitors to the air conditioned bar, which can be approached by land or by sea (a small port is planned for sailors). Each of the small port-hole tables will be provided with its own movable spotlight. No mention was made of construction plans



THE INDIAN BUILDER, July 1954 (Special Architecture Number). A review of current trends in Indian architecture is introduced by editor Patwant Singh, who describes India as "reluctant to tear herself away from the powerful influence of architectural tradition, yet beckoned inevitably onwards by the intriguing vistas of contemporary assertiveness." To the "reluctant" architects he says: "India owes its present entity to its revolutionaries. But what it needs today . . . is a revolutionary in the field of architecture." He is encouraged, however, by such buildings as West Bengal's Supplementary Secretariat (left)—H. Rehman, architect, and International Students House, University Enclave, at Delhi (right)—J. M. Benjamin, architect

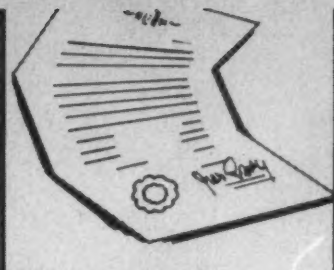




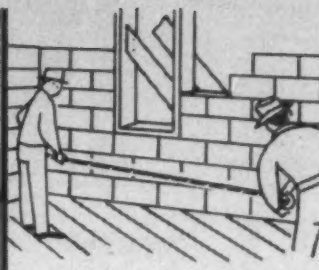
planning



specifying



bidding



field checking

12 steps in every laboratory job



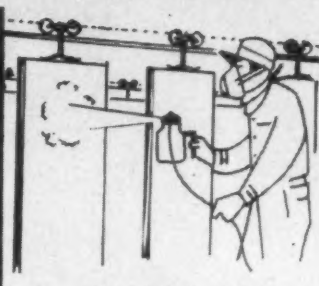
detailing



scheduling



fabricating



finishing

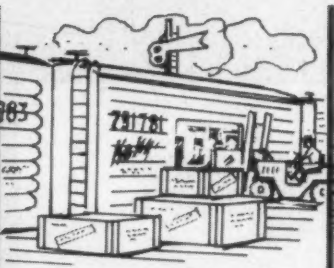
12 reasons why it's smart to allow



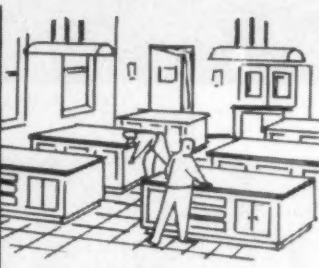
trimming



inspecting



shipping



installing

adequate lead-time

when ordering laboratory equipment!

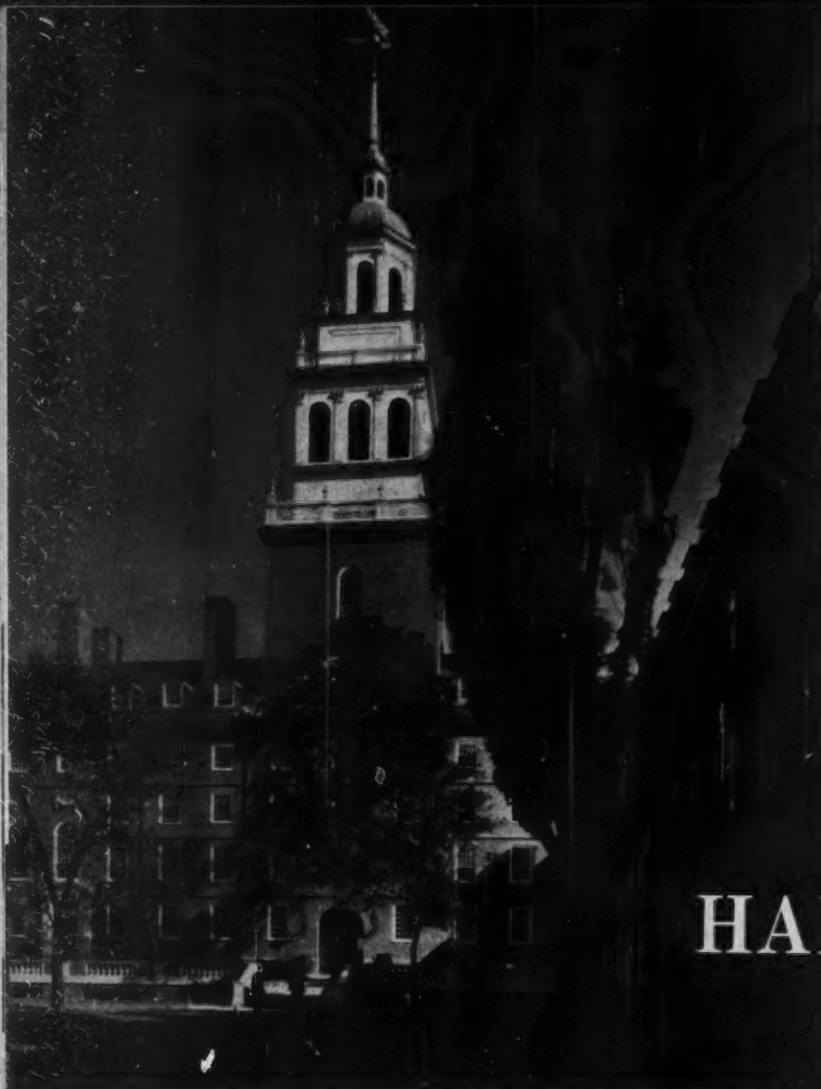
If your new laboratory is to be a good one, all these steps (and many others not shown here) must be done, and done right. This requires a tremendous background of experience, skilled planners and workers, highly specialized manufacturing facilities—and time.

When planning a new laboratory, use this simple formula to insure lasting satisfaction . . . see that your contract is placed with a specialized manufacturer of laboratory equipment, and allow adequate time for completion of his work.

For your FREE copy of Better Laboratory Planning, 28 pages of photos and planning data, write to Dept. A

LABORATORY EQUIPMENT SECTION • SCIENTIFIC APPARATUS MAKERS ASSOCIATION

20 North Wacker Drive • Chicago 6, Illinois



Above: LOWELL HOUSE



1



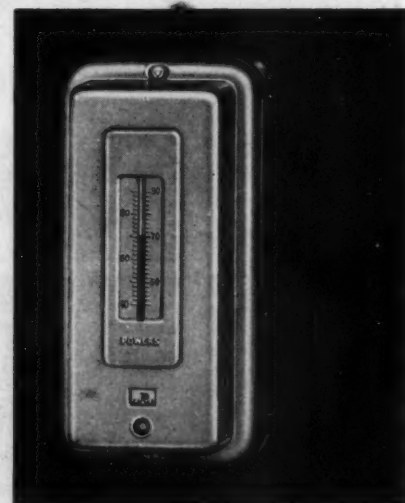
2



3



4



Architects: for Lowell House, Dunster House, McKinlock Hall, Vanderbilt Hall, Littauer Building, Gordon McKay Laboratory—SHEPLEY, BULFINCH, RICHARDSON & ABBOTT • for Aldrich Hall—PERRY, SHAW, HEPBURN, KEHOE & DEAN and McKIM, MEAD & WHITE, Associate Architects.

Mechanical Engineers: for Lowell House, McKinlock Hall, Vanderbilt Hall—FRENCH & HUBBARD • for Dunster House, Littauer Building—RICHARDSON & GAY • for Aldrich Hall—HAYDEN, HARDING & BUCHANAN • for Gordon McKay Laboratory—R. G. VANDERWEIL.

Heating Contractors: for Lowell House, McKinlock Hall—CLEGHORN CO. • for Dunster House—T. J. MURPHY & CO. • for Vanderbilt Hall—JAS. S. CASSEDY, INC. • for Littauer Building—V. J. KENNEALLY CO. • for Aldrich Hall—THE MERRILL CO., INC. • for Gordon McKay Laboratory—McLEAN-COUSENS & BARTON, INC.

Oldest university in the U.S.A.

HARVARD

...another distinguished user of

- 1 DUNSTER HOUSE, on the Charles River
- 2 MCKINLOCK HALL
- 3 VANDERBILT HALL
- 4 LITTAUER BUILDING



ALDRICH HALL, Harvard Graduate School of Business Administration

One of the 17 unique classrooms shown at left seats 158 students; three others seat 80; and 13 accommodate 102 each. The rooms have been arranged to provide an intimate relationship between instructor and student in the give-and-take discussions by the case method generally used throughout the Harvard School of Business Administration.

Below: GORDON McKay LABORATORY

Interior photo shows two-story room with important features, a high door and removable intermediate floor to permit varying uses. Research in this laboratory is conducted in mechanical engineering, electronics, electrical engineering and the properties of matter.

POWERS

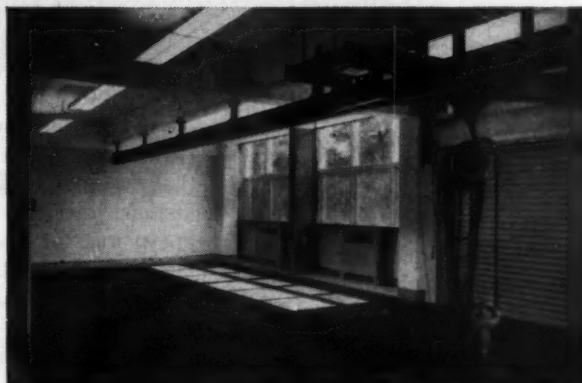
AUTOMATIC SYSTEMS OF

Temperature Control

On the Harvard campus are to be found some of America's most beautiful buildings. A few of them which benefit from the maximum thermal comfort and fuel savings assured by POWERS control are illustrated here.

For more than half a century POWERS control has been renowned for its matchless ability to give many years of efficient economical service. Users often report 25 to 50 years of reliable control with a minimum of repairs.

Experience gained here and in thousands of other famous buildings qualifies POWERS to help you select the most economical and efficient temperature control for your buildings. When problems of temperature control arise, call our nearest office or write us direct.



THE POWERS REGULATOR COMPANY

SKOKIE, ILLINOIS | Offices in 60 cities in U. S. A., Canada and Mexico



Over 60 years of Automatic

Temperature and Humidity Control

O P I N I O N

Design freedom, within obvious and necessary economic limits, appears to set the architectural context for the HHFA college housing program (see pages 151-154). The RECORD asked 15 architects who have worked on projects financed under the program for their comments on the relationship between HHFA and the architect; comments of the ten who replied are printed in full below

I have worked with the officials of Housing and Home Finance Agency, Fort Worth, Texas, for the past two years. Our relations with this branch have been most pleasant. The freedom for design and construction under this branch has been most refreshing. I can only say that other branches of our Federal government need to take a lesson from the HHFA in giving more freedom to the architect or engineer.

— Kenneth Easterwood
Waco, Tex.

It has been a pleasure to work with the HHFA on this project. They have been extremely cooperative in expediting the necessary approvals and gave the architects and the college practically complete freedom of design within the financial limitations established. It has thus been possible to develop a solution suitable to local problems and conditions and to achieve a contemporary building compatible with the surrounding traditional college architecture.

— John Merrill Jr.
Belluschi and Skidmore,
Owings & Merrill, Architects
Portland, Ore.

From an architect's standpoint our relationship with this agency was in all respects most satisfactory. We were given complete latitude to develop plans which were tailored to suit the needs of our client. The HHFA was most cooperative and did not in any way dictate the policy of planning or choice of materials. The Housing and Home Finance Agency accepted our preliminary plans for these dormitory units when first submitted to them as a development which had been especially created to satisfy the needs of a particular college in a particular geographical area. They

at no time questioned the planning or the selection of materials.

The offices of the HHFA were consulted during the early stages of planning and their first suggestion to this office was that we concern ourselves with the primary fact that their program was based on economy and the careful consideration of not only good basic materials but the cautious use of square foot areas. It was our feeling from the inception of the project that square foot area per student must be carefully considered in order to arrive at a solution acceptable to both client and agency.

Our earlier school dormitory work proved that the use of sturdy indestructible materials, although not always the cheapest, was the best investment when maintenance is to be considered. Therefore, concrete and masonry walls, with paint applied direct, were selected over plastered stud walls which tend to have a high casualty rate in college dormitory buildings. All this basic thinking was favorably looked upon by the HHFA and no major changes in either basic specifications or plans were proposed by the agency.

The HHFA cooperated most enthusiastically in all respects and from an Architect's point of view working with the agency of the Federal Government has been a most happy experience. The cooperation which they gave this office during all phases of both planning and construction would make most architects' hearts glow with new enthusiasm. I say this because I commenced this program with the firm conviction that I was to be hogtied and hobbled at every stroke of the pencil and every clause of the specification.

This was not the case in any respect. Instead of red tape and ultimatums we received encouragement and helpful consideration. The final results speak

for themselves. The owners have the kind of buildings that best fit their requirements and it has been publicly stated that the HHFA is pleased with the final results. The architect is happy — what more can one wish.

— Kingsford Jones
Menlo Park, Cal.

It was indeed pleasant to work with the various members of the staff of the Housing and Home Finance Agency. Their technical knowledge together with their sympathetic understanding of the architect's problem enables them to give assistance far beyond that which could be normally expected. The freedom of design which they permitted and their recognition of existing and local conditions eliminated the necessity of producing a stereotyped stock plan defined by minimum standards. We have at Tufts a structure that truly reflects the desires of the college authorities.

— Arland A. Dirlam
Boston, Mass.

In matters of design HHFA has been very cooperative and in no sense have they been dictatorial about the design of the building. They gave me to understand, and I believe they were sincere, that their interest simply lay in seeing that their mortgage was well secured by a building which would last the term of the mortgage, that the project be financially sound and that no money be wasted in "plush items." They have adhered to this policy completely and have been very cooperative. My relationship with them has been most pleasant, and their local representative, Mr. Sandquist, has been very fine to work with.

— James M. Hunter
Boulder, Colo.

We concur in your impression that HHFA has allowed us the greatest freedom in developing the plans. The Philadelphia Regional Office was most cooperative in guiding us through the few Federal requirements. We were allowed to design the buildings to conform in plan and elevations to existing buildings on the campus. The contract documents were reviewed promptly, and, as timing was of great importance, the contractor was allowed to proceed at once with the work. Field inspection by the HHFA was prompt and directives were few. The financial procedures were also held to a minimum. Documentation was reasonably simple and funds

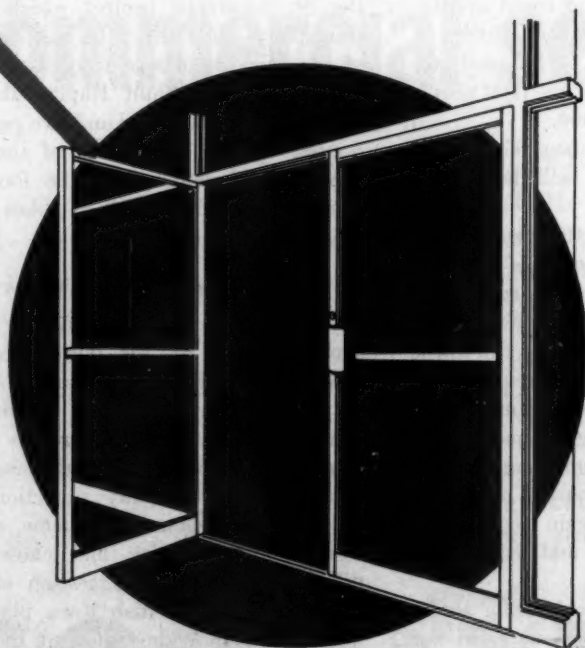
(Continued on page 246)

Architect Eldredge Snyder of New York has used AMARLITE ALUMINUM ENTRANCES in Oberlin College Inn.

SEE Architectural Record's Building Types Study Number 218



Inviting entrances by *Amarlite*



These smart (yet unobtrusive) aluminum doors are the logical choice in more and more new buildings—public, industrial, commercial. Amarlite Entrances are specified by architects because of these six points of leadership:

- ① Quality — (always)
- ② Strength plus rigidity
- ③ Finish — (incomparable)
- ④ Development of new features
- ⑤ Distribution for prompt service
- ⑥ Consistent price policy.



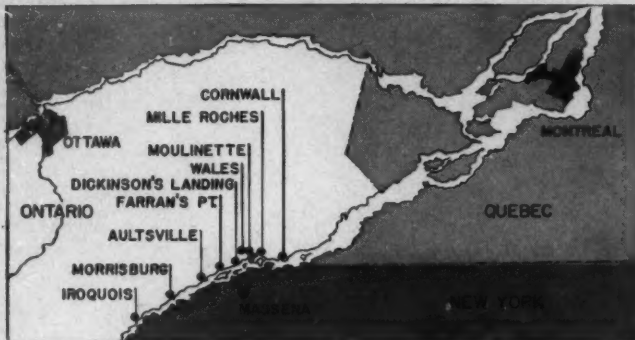
For full information on Amarlite Aluminum Entrances, ask a glass dealer or write for your copy of the 1955 Amarlite Catalog.

American Art Metals Company,
433 Bishop Street, N.W.
Atlanta, Georgia

AMARLITE

aluminum entrances

• ATLANTA, GEORGIA • BROOKFIELD, ILLINOIS
• DALLAS, TEXAS • ENGLEWOOD, NEW JERSEY

NEWS FROM CANADA *By John Caulfield Smith*

At left: the area to be affected by the St. Lawrence power development, showing the towns involved in Hydro's plan. Below: a detail of the International Rapids Section of the river as it will look after inundation, showing locations of the projected new towns and of the power construction planned by Ontario Hydro and the New York State Power Authority



ST. LAWRENCE POWER PROJECT PRODUCES THREE NEW TOWNS

WHEN THE BANKS OF THE ST. LAWRENCE are flooded, three years hence, as a result of power construction in the International Rapids section of the river, residents of the eight towns to be inundated will already have moved into the new towns planned by the Hydro-Electric Power Commission of Ontario, Canadian agent for the international power project; the American agent is the New York State Power Authority. Some 18,000 acres on the Ontario side—a 39-mile strip between Cornwall and Cardinal—will be flooded.

Hydro's general plan for the area, as conceived by H. D. Rothwell, liaison engineer for Hydro, and Kent Barker, professor of architecture at the University of Toronto serving as consultant to Hydro, calls for three entirely new towns and part of another: two new towns incorporating several villages which will be flooded, a new site for the town of Iroquois and a subdivision to replace about one-third of Morrisburg, which will be only partially flooded.

The regional plan, which Hydro says is "only a suggested pattern for land use," is set out in two phases—the immediate replacement of the affected towns and the possible future expansion of the area.

New Town No. 1 will incorporate the villages of Aultsville (pop. 350), Far-

ran's Point (pop. 350), Dickinson's Landing (pop. 200) and Wales (pop. 150); it can expand if necessary to a population of 7000. New Town No. 2 will replace Moulinette (pop. 300) and Mille Roches (pop. 1100), with an expansion limit of 3000. Iroquois, a town of 1100, will be moved to a site north of its present location, and could eventually handle a population of 10,000. A 100-acre subdivision is planned for Morrisburg, which now has 1800 people and could grow to 12,000.

For the time being, about 95 per cent of the land involved will be left in agricultural use.

Industry's place in the plan is provided in a limited amount of space in each community and in larger areas tentatively set aside for large-scale industrial development outside the towns—a 6000-acre tract between Morrisburg and Aultsville has been mentioned for this purpose. The planners have also taken into account the region's potentialities as a tourist attraction and have selected, again tentatively, sites for natural parks and recreational areas.

Originally, plans for housing under the rehabilitation program called for the construction of "hundreds" of new homes, and architectural designs had been proposed by Hydro. These would have been financed by the owners after

compensation payments had been made. Subsequent surveys among the home owners, however, have indicated a rather widespread preference for bodily relocation of the houses, and Hydro accordingly is considering moving these houses wherever possible or desired.

The power construction planned by the St. Lawrence project which will principally affect this area will consist of a control dam near Iroquois Point, a dam in Long Sault Rapids at the head of Barnhart Island and two powerhouses, one on either side of the international boundary, at the foot of Barnhart Island, as well as dikes and navigation canals.

Hydro and Human Relations

Hydro's policy in planning for persons displaced by the power project has been one of continual consultation with the towns' planning boards or similar groups. Although there has been some disagreement over compensation arrangements, the only objection to Hydro's town planning scheme came from Iroquois, which had chosen a different site at the suggestion of its own consultant, British town planner Dr. Wells Coates. The argument, though prolonged, was quickly resolved when the Caldwell Linen Mills, Iroquois's only industry, accepted Hydro's site; the town followed suit.

(Continued on page 30)

*it's NEW
Goodyear
H.D.H.*



The heavy-duty homogeneous vinyl built to stand the gaff and last under toughest commercial service!

TOP-TO-BOTTOM DEEP in *Color*, in *Quality* —new Goodyear H.D.H. All-Vinyl is the solid answer to solid performance, even in the busiest traffic areas.

SUPER-TOUGH—it is proving itself in such rugged duty as supermarket service and other heavy-traffic commercial installations.

SLASHES MAINTENANCE—it comes factory pre-polished. Never needs waxing! Costs much less per square foot to

maintain. The savings — in both time and cost of wax — actually pay for the floor in a few short years!

OFFERING A LIFETIME OF CAREFREE BEAUTY for every type of prestige installation—Goodyear H.D.H. All-Vinyl comes in tiles and rolls, in 14 "Perfect-For-Home-Or-Business" Colors!

FOR FULL INFORMATION on the complete Goodyear All-Vinyl Flooring line, write: Goodyear, Flooring Department A-8311, Akron 16, Ohio.

GOODYEAR  **All-Vinyl**
YOU CAN'T WEAR OUT ITS LOOKS!

TITUS MANUFACTURING CORPORATION

Salutes THE

GREATEST SELLING FORCE

IN AIR CONDITIONING TODAY



● Don L. Titus
President
TITUS MFG. CORP.



● Robert W. Titus
Vice-President
TITUS MFG. CORP.

Titus MANUFACTURING CORPORATION
MANUFACTURERS OF TITUS *Airfool* GRILLES

P. O. BOX EIGHT-ONE-ZERO • TELEPHONE AREA 3-3243 • WATERLOO, IOWA

To our Customers in the Industry:

A great part of the success of any business depends on the men who represent that enterprise in the field. It is their knowledge, their hard work and service which help form a firm foundation for acceptance of that product and growth of that enterprise.

The wonderful co-operation, service, and hard work of these representatives have helped build the Titus name.

We are proud to be served by such outstanding men in the heating and air conditioning field.

Very sincerely,
Don and Bob Titus

AMERICA'S FINEST AIR CONDITIONING OUTLETS...



● D. M. Allen
D. M. ALLEN CO.
Kansas City, Missouri



● J. H. Allison
E. J. BECKMAN CO.
Pittsburgh, Pa.



● F. E. Anderson
ENGINEERING PRODUCTS CO.
Charleston, West Va.



● A. C. Baechlin
A. C. BAECHLIN CO.
Phoenix, Arizona



● E. J. Baker
E. J. BAKER CO.
St. Paul, Minn.



● C. H. Barnhardt
ALBUQUERQUE
ENGINEERING CO.
Albuquerque, New Mexico



• John Bennett
H. L. McMurtry & Co.
Caribbean Rep.



• Geo. F. Bertrand
Geo. F. Bertrand Co.
Philadelphia, Pa.



• J. M. Bird
GENERAL
EQUIPMENT LTD.
Vancouver, B. C., Canada



• Eugene Dolstad
EUGENE DOLSTAD LTD.
Edmonton, Alberta, Can.



• E. B. Boston
AIR PRODUCTS
EQUIPMENT CO.
Chicago, Illinois



• J. H. Christman
THE THERMAL
PRODUCTS CO.
Akron 2, Ohio



• S. S. Colle
AIR CONDITIONING
ENG. CO.
Montreal, Quebec, Canada



• John A. Cooper
FLINN ENGINEERING CO.
Little Rock, Ark.



• D. J. Crawley
CRAWLEY GORBANDT CO.
Atlanta, Ga.



• E. H. Crawley
CRAWLEY GORBANDT CO.
Atlanta, Ga.



• George S. Flinn
FLINN ENGINEERING CO.
Memphis, Tenn.



• F. R. Foote
F. R. FOOTE CO., INC.
Albany, N. Y.



• R. A. Frey
FREY EQUIPMENT CO.
Dayton 2, Ohio



• J. L. Frisse
THE THERMAL
PRODUCTS CO.
Cleveland, Ohio



• R. H. Gales
D. E. McCULLY CO.
Omaha, Neb.



• I. M. Golan
I. M. GOLAN COMPANY
Fort Worth, Texas



• E. T. Gorbandt
CRAWLEY GORBANDT CO.
Atlanta, Ga.



• Harry E. Gray
GRAY EQUIPMENT
SALES CO.
Toledo, Ohio



• John B. Hewett
JOHN B. HEWETT CO.
New York 17, N. Y.



• R. S. Hudson
AIR PRODUCTS
EQUIPMENT CO.
Chicago, Ill.



• Jim Hutsiniller
R. E. CHASE & CO.
Spokane, Washington



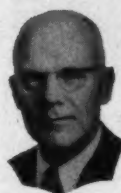
• J. G. Johns
J. G. JOHNS & CO.
Arlene, Texas



• H. Dewey Jones
H. DEWEY JONES CO.
Columbus, Ohio



• Margaret Lancaster
LANCASTER, MAY & CO.
Baltimore 18, Md.



• John J. Landers
LANDERS
ENGINEERING CO.
Buffalo, N. Y.



• W. L. Lashley
W. L. LASHLEY & ASSOC.
Houston, Texas



• L. F. Luchner
L. F. LUCHNER CO.
Boston, Mass.



• N. H. Malcolm
AIR PURIFICATION CO.
Denver, Colorado



• C. E. Malone
C. E. MALONE CO.
St. Louis, Mo.



• Robert E. Mason
ROBERT E. MASON & CO.
Charlotte, N. C.



• Clarence L. May
LANCASTER, MAY & CO.
Baltimore, Md.



• H. L. McMurry
H. L. McMURRY & CO.
Jacksonville, Fla.



• Walter B. Moses, Jr.
ENGINEERING SALES CO.
New Orleans, La.



• George Q. McNamara
Geo. Q. McNAMARA CO.
Detroit, Mich.



• D. C. Murphy
D. C. MURPHY CO.
Des Moines, Iowa



• W. R. Ousley
H. L. McMURRY & CO.
Miami 2, Fla.



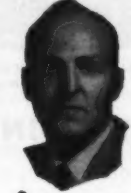
• Frank S. Ozanne
R. E. CHASE & CO.
Seattle 1, Washington



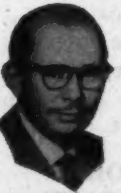
• Gus Pavlet
ENGINEERING SALES CO.
Baton Rouge, La.



• Ben Paller
PALLER
ENGINEERING CO.
Indianapolis, Ind.



• George Richardson
THERMAL
ENGINEERING CO.
Boise, Idaho



• A. Q. Roberts
I. M. GOLAN CO.
Dallas, Texas



• R. E. Sanford
SANFORD MECHANICAL
EQUIPMENT CO.
Oakland, Calif.



• R. A. Sansing, Jr.
S. C. BRATTON SALES
ENGINEERS LTD.
Birmingham, Ala.



• J. W. Snyder
SNYDER EQUIPMENT CO.
Cincinnati, Ohio



• R. E. Stallings
PALLER
ENGINEERING CO.
Fort Wayne, Ind.



• James R. Toed
COOLING & HEATING
ENGINEERS
Los Angeles, Calif.



• Hobart Tenoff
R. E. CHASE & CO.
Spokane, Washington



• Laurence Trant
LAURENCE TRANT & CO.
Norfolk, Va.



• Vernon Tupper
VERNON S. TUPPER CO.
Nashville, Tenn.



• H. F. Warren
R. E. CHASE CO.
Tacoma, Washington



• S. S. Webb
HEAT TRANSFER
EQUIPMENT CO.
Oklahoma City, Okla.



• Charles D. White
LANCASTER, MAY & CO.
Washington, D. C.



• J. M. McWilliams
ARTHUR S. LEITCH CO.
LTD.
Toronto, Ont., Canada



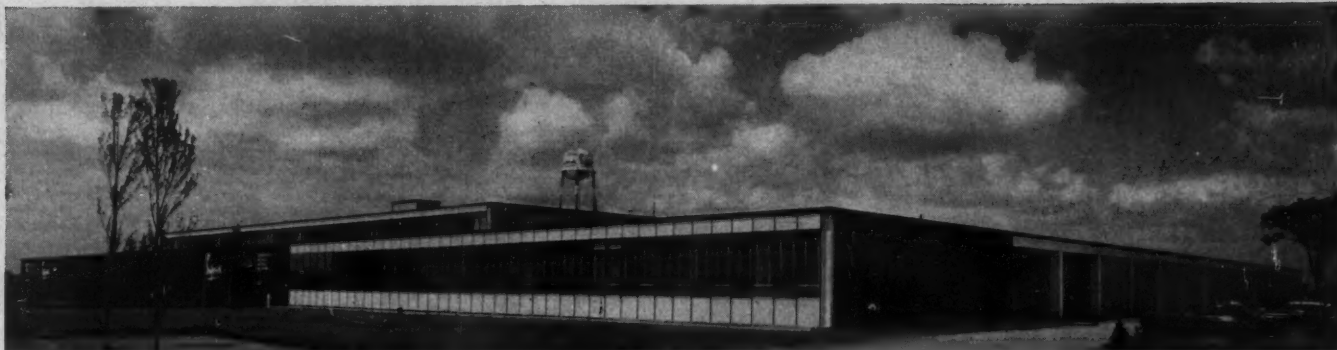
• W. G. Woolley
R. E. CHASE & CO.
Portland, Ore.



• L. W. Worthington
L. W. WORTHINGTON CO.
Billings, Mont.



• R. F. Zimmerman
R. F. ZIMMERMAN & CO.
Shreveport, La.



Warehouse for Robert Simpson Co. Ltd., Toronto, was designed by Toronto firm John B. Parkin Associates

Beauty
that outlasts the building



Gymnasium, Alexander Ramsey Senior High School, St. Paul, Minn. Arch.: Magney, Tusler & Selter, Minneapolis. Installed by: Chas. H. Anderson Floors, Inc., Minneapolis.

**... ROBBINS IRONBOUND* CONTINUOUS STRIP*
MAPLE FLOORING**

You're looking at a gymnasium floor designed to "take it"! Uniformly resilient, tight grained and splinter resistant, it will still be smoothly beautiful for generations to come.

To achieve this happy combination of beauty and long run economy Robbins uses finest strips of Northern Maple, laid in mastic and interlocked with saw-tooth steel splines at the end of each strip. That's why a Robbins IRONBOUND CONTINUOUS STRIP floor stays tight and smooth so many times longer.

If you are planning a school job you can find information and general specifications on Robbins Ironbound Continuous Strip floors in Sweet's File 19 E-92, or better still, write Robbins Flooring Company, Reed City, Michigan, for name of your nearest Robbins Ironbound contractor.



ROBBINS FLOORING COMPANY

WORLD'S LARGEST MAPLE FLOORING MANUFACTURER

*T.M. Reg. U.S. Pat. Off. Reed City, Michigan

Ishpeming, Michigan



**ARCHITECTS, ENGINEERS
DRAW HIGHEST EARNINGS**

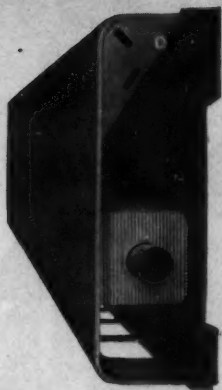
Architects and engineers were Canada's top income group in 1952, according to the latest tax statistics released by the Department of National Revenue. The architect-engineer average income of \$12,266 was not only the highest of any group, but was the highest any group had ever recorded.

Doctors and surgeons, the second highest group, reported an average income of \$10,522, while lawyers, who led the field in 1951, were third in 1952 with \$9,222. In the last five recorded years, architects and engineers have topped the list three times; the lawyers led twice.

**FLOOD CONTROL REPORT
PROMPTED BY HURRICANE**

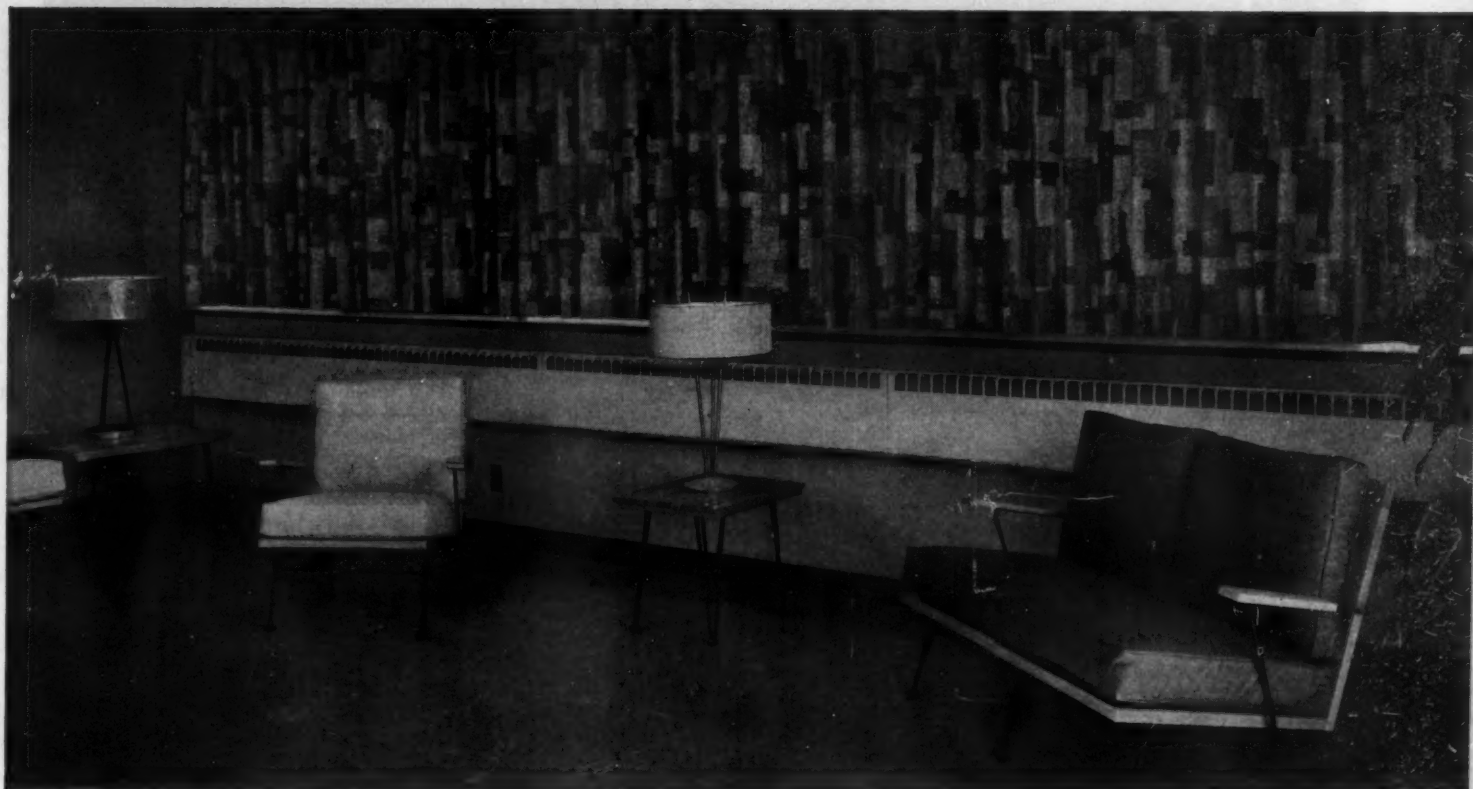
Prompted by the disastrous effects on Toronto of last October's Hurricane Hazel, which cost the unprepared city 73 lives and \$25 million in damages, Prime Minister Louis St. Laurent appointed engineer J. B. Carswell and investment banker D. Bruce Shaw to a special investigating commission to suggest flood control measures for the area.

(Continued on page 32)



IN the Institutional Picture . . .

*Nesbitt Sill-line Radiation demonstrates its effectiveness
in the new Hospital Pavilion of Jefferson Medical College*



THE rapid development of modern institutional design calls for a conformable means of heating. Nesbitt provides this most acceptably in *Sill-line*, a perimeter type of high capacity fin-and-tube radiation housed in a beautiful casing that enhances the appearance of any modern interior.

In addition to its radiant heat, *Sill-line* provides a curtain of convected warm air along cold walls and windows, overcoming downdraft and giving the uniform comfort so desired in today's offices, classrooms, and hospitals.

Constructed for permanence and ingeniously designed for quick and easy installation without cutting, Nesbitt *Sill-line* is ideally suited to modern building production.

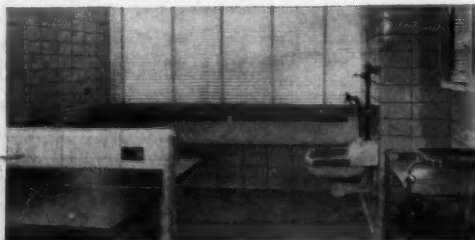
Sill-line sections are immediately available in protective cartons: four cabinet sizes; seven standard lengths; heating capacities from 700 to 2675 Btu per lineal foot; and all needed accessories. It may be used with any hot water or steam system. Write for Publication 102.

Nesbitt

SILL-LINE RADIATION

Made and sold by John J. Nesbitt, Inc., Philadelphia 36, Pa.

Vincent G. Kling, *Architect*
A. E. D'Ambly, *Engineer*
W. M. Anderson Co.,
Heating Contractor



Sill-line conforms in a utility room (above)

*Its functional beauty graces
a semi-private room (right)*



THE RECORD REPORTS

CANADA

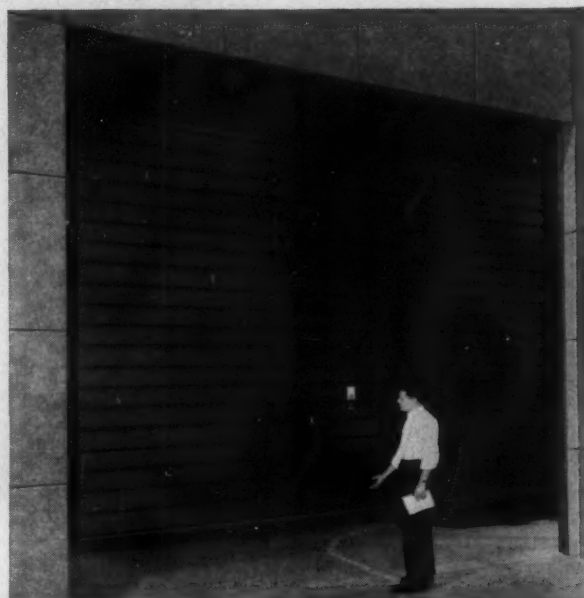
(Continued from page 30)

The Carswell-Shaw report blames the extent of the disaster on public laxity, which permitted building in dangerous river-bank areas, and calls for a \$5 million program to prevent a repeat performance.



Recently completed in Calgary, Alta.: a new office and warehouse for the Lennox Furnace Co. (Canada) Ltd., designed by architects Rule, Wynn & Rule of Calgary and Edmonton

Simplicity... the keynote of
MODERN design



MORRISON

Roly-Door
steel sectional doors

RESIDENTIAL • COMMERCIAL • INDUSTRIAL

CLEAN, MODERN FUNCTIONAL SIMPLICITY that blends with all types of architecture is the hallmark of Morrison Roly-Doors.

SIMPLIFIED DESIGN ensures safe, easy, trouble-free installation and operation . . . manual, electrical and by remote control.

BONDERIZED, ALL-STEEL, WELDED CONSTRUCTION provides lasting good looks and a durability that defies the weather and years of hard use.

ECONOMICAL INSTALLED COST made possible by sound engineering and modern, precise, mass production . . . Roly-Doors cost

no more than ordinary wood or metal doors for the same purpose.

OVER 100 STANDARD SIZES ready for immediate delivery and facilities to produce special sizes to individual specifications provide a Roly-Door for every overhead door requirement.

NATIONWIDE SALES AND SERVICE . . . prompt delivery and expert installation service are offered by Roly-Door Distributors and Dealer-Installers located in the principal cities of the U.S. and Canada. They are listed in classified telephone directories.



Complete Roly-Door Specifications are available in Sweet's Architectural File or from:

Roly-Door Division

MORRISON STEEL PRODUCTS, INC.

651 Amherst Street, Buffalo 7, New York

Also manufacturers of MOR-SUN WARM AIR FURNACES and MORRISON SERVICE BODIES
In Canada, Roly-Door Distributors, Ltd., 1330 Bloor Street W., Toronto 4, Ont.

Major recommendations of the commission include: the expropriation of land lying below flood level and the prohibition of further building in these areas; the removal to higher ground of houses already standing in some of these areas; the conversion of grounds below flood level into protective green belts; raising and widening a 17-mile dyke surrounding Holland Marsh; and cleaning and straightening the bed of the Humber River.

OPTIMISTIC OUTLOOK HELD FOR HOUSING THIS YEAR

A high volume of housing construction in 1955, at least for the first half of the year, was predicted by Gordon S. Shipp, president of the National House Builders Association, in a recent speech at Hamilton, Ont. A comparison of the number of housing starts in the first nine months of 1953 and of 1954 indicates, he reported, a carryover of 65,000 uncompleted units into 1955, in contrast to the 59,967 carried into 1954.

As for the last half of 1955, Mr. Shipp wasn't sure. On the optimistic side, he noted the continuing high birth rate, the need of many families for larger quarters, and the more generous financing offered by the revised National Housing Act. On the pessimistic side, he observed that the rate of family formation shows signs of slackening, that immigration and employment prospects have dropped slightly, and that increasing availability of rental accommodations may retard house sales in some areas. All in all, however, Mr. Shipp concluded that Canada's high level of house production would continue in 1955.

(Continued on page 36)

Avoncraft

PORCELAIN ENAMEL

ARCHITECTURAL USES UNLIMITED

There's a new and exciting architectural product on the market today, and its name is AVONCRAFT. AVONCRAFT Porcelain Enamel... with the strength of steel, the beauty, cleanliness and durability of porcelain. Load-Bearing Walls provide inner finished walls, structural ribs and insulation space. Load-Span Decking provides high safety factor over long unsupported areas, smooth railings and insulated roof. Curtain Walls are engineered for flexibility of architectural design. Like a sculptor with a versatile material, the architect can mold this amazing maintenance-free product to fit the modern design of schools, motels & cabañas, service stations, and to industrial and commercial applications of many types. Entire buildings can be designed of this product, which is "as modern as tomorrow" on the architectural scene. Or, it can be used as a liner in industrial applications where its tough beauty (impervious to fumes, chemicals, and dirt) and maintenance-free features are of paramount importance...

PRESENT YOUR PROBLEMS TO US

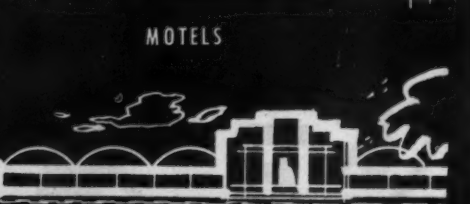
architectural products

Avoncraft

A Division of Avondale Marine Ways, Inc. P. O. Box 1030, New Orleans 8, U. S. A.



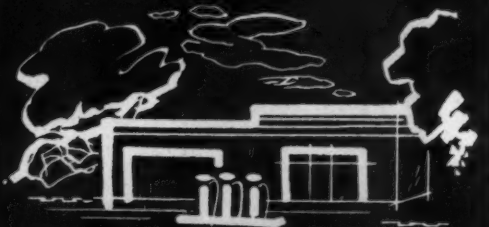
CABAÑAS



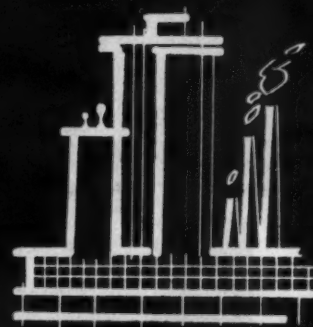
MOTELS



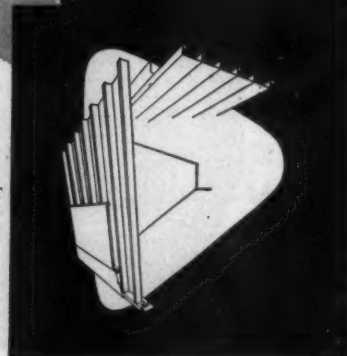
SCHOOLS



SERVICE STATIONS



INDUSTRIAL AND
COMMERCIAL
APPLICATIONS



Engineered Products



FOR
**AIR CONDITIONING,
HEATING, and
VENTILATING**

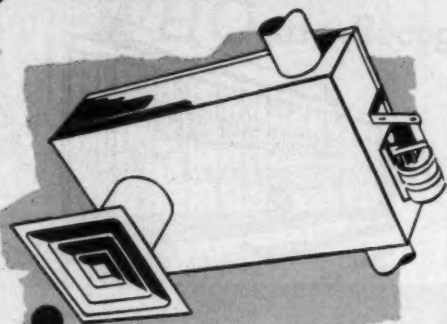
Commercial, Industrial, Institutional, and Residential



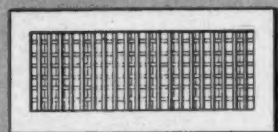
**ONE SOURCE
FOR
ALL FIVE**



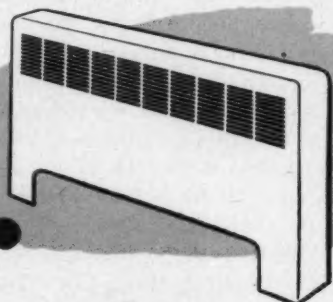
Aerofuse Ceiling Diffusers are available in a wide selection of types and sizes, styled and engineered to meet the most rigid requirements of appearance and performance at the point of air delivery.



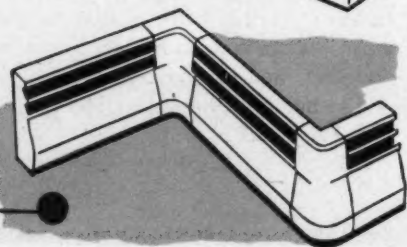
T & B High Pressure Diffuser Units are the result of many years of laboratory experiment and practical experience in the field. Units now in operation handle branch duct velocities up to 4000 FPM, discharge air without noise or drafts.



Tri-Flex Supply Air Grilles and Registers . . . Aerovane Return Air Grilles and Registers. Standard sizes for economy and prompt delivery. Individually adjustable face bars. Registers equipped with opposed blade dampers.



T & B Convectors are widely used in homes and apartments. Two types are available . . . Type R for recessed installation . . . Type F for free standing installation. Styled for beauty, engineered for comfort.



T & B Baseboard combines the heating comfort and smart appearance essential in the modern home. Two types . . . recessed . . . free standing . . . both designed for ease of installation.

See the
TUTTLE & BAILEY
EXHIBIT
ASHVE Show, Booth 31

TUTTLE & BAILEY inc

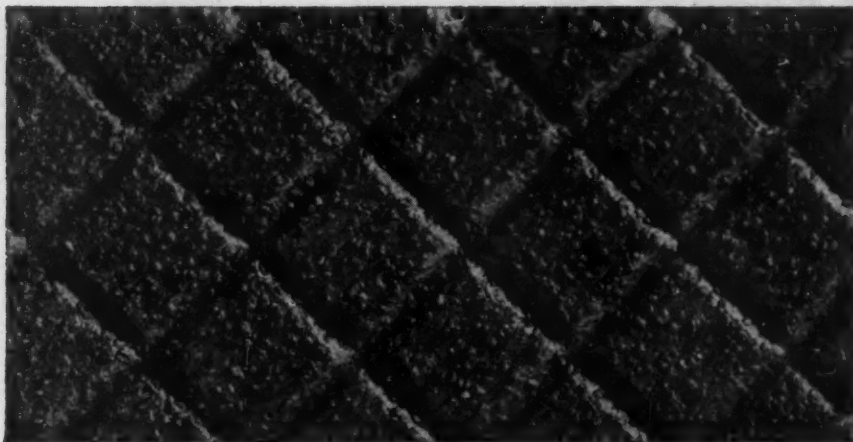
NEW BRITAIN, CONNECTICUT

There is no "or equal" for

FERALUN

ABRASIVE TREADS

Here's ★
the proof of
FERALUN
superiority



★ Here is an unretouched photograph of a *Feralun* tread taken after acid treatment. (Paint is removed and acid is used to eat away the metal base so as to isolate the actual abrasive content of the tread.) Note the full and even distribution of abrasive—for greater safety, longer wear.



★ Here is an unretouched photograph of an abrasive tread, purchased on the open market of the type often offered as an equal of *Feralun*, after the identical acid test. Note the meager amount of abrasive and spotty distribution.

The life and non-slip effectiveness of any abrasive tread is approximately proportional to the amount of abrasive embedded in the surface. *Feralun* has provided lasting safety—free from maintenance—for the past 35 years.

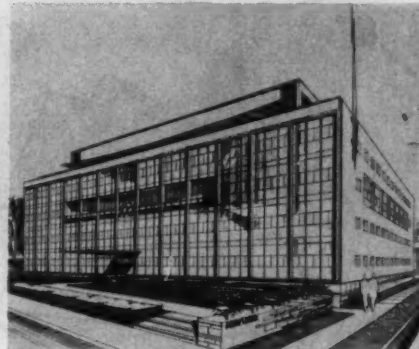
Feralun is available as treads, thresholds, floor plates and elevator sills. Also in *Bronzalun*, *Alumalun* and *Nicalun*. See *Sweet's Catalog 1954-12b/Am.*

AMERICAN ABRASIVE METALS CO. • IRVINGTON II, N. J.

THE RECORD REPORTS

CANADA

(Continued from page 32)



COMPETITION HELD FOR OTTAWA POLICE BUILDING

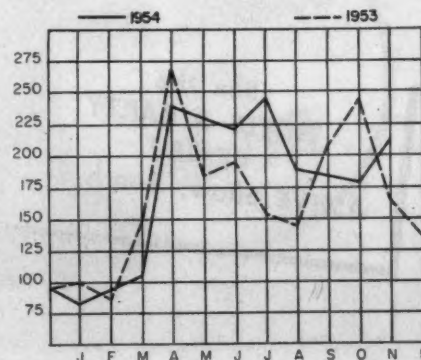
First place in the recent architectural competition held by Ottawa to select a design for its new Police Building went to Peter Dickinson, A.R.I.B.A., M.R.A.I.C., who was awarded the commission for the building. Mr. Dickinson is a partner in the Toronto firm of Page & Steele, which will serve as associate architects for the building, shown in the rendering above.

Runners-up in the competition, which attracted 37 entries, were Hart Massey and Leo Dirassar, Ottawa, who were awarded \$500; Guy Desbarats and Ray Affleck, Montreal, \$300; and Fred Lebensold, Montreal, \$200.

Members of the Board of Assessors were Magistrate Glenn E. Strike, Q.C., chairman of the Board of Commissioners of Police; Watson Balharrie, Ottawa architect; and C. Maxwell Taylor, the city's building inspector and supervising architect.

(More news on page 38)

Contracts Awarded: Comparative Figures Compiled by Maclean Building Reports (in \$ million)



Q

...WHAT is the Foremost Institutional Project in America?

A

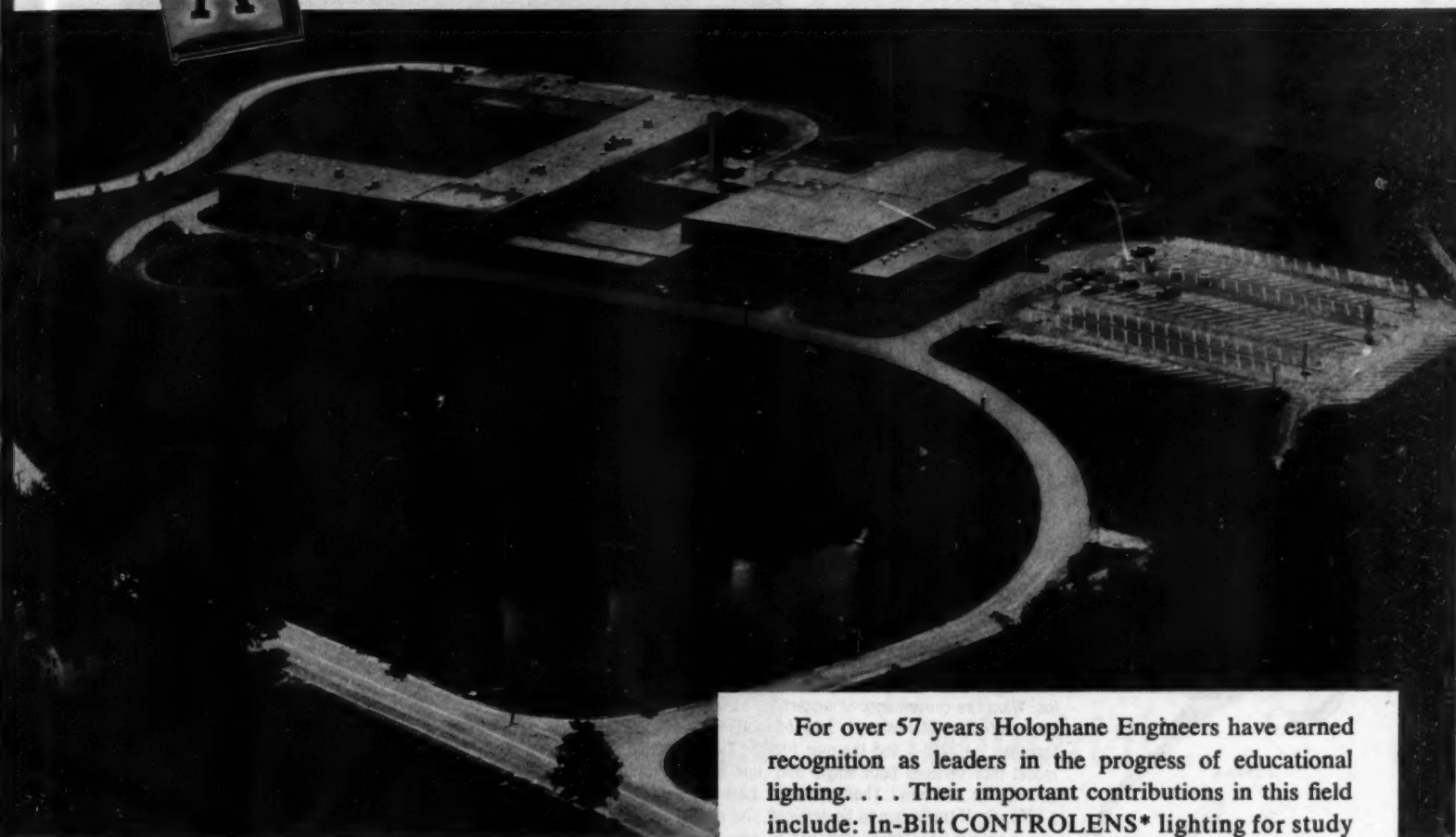
The Multi-Billion-\$ EDUCATIONAL BUILDING PROGRAM

Q

...WHO are Recognized Authorities on Educational Lighting?

A

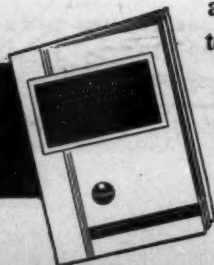
Unquestionably, the HOLOPHANE ENGINEERING STAFF



Regional Educational Center, Holden, Mass.

**For Better Lighting
Be Specific...**

HOLOPHANE



For over 57 years Holophane Engineers have earned recognition as leaders in the progress of educational lighting. . . . Their important contributions in this field include: In-Bilt CONTROLENS* lighting for study rooms, assembly halls and blackboards; HIBAY*, LOBAY* and REFRACTOLENS* lighting for recreational areas, and many other major developments.

Today, with this unique experience and specialized skills, Holophane is finding new and better ways to meet the lighting needs of expanding educational facilities—in colleges, as well as secondary schools.

Architects, engineers and educational administrators are invited to call in Holophane Engineers—at headquarters or in the field—for consultation without obligation.

Write for "Guide to Lighting Educational Institutions"

HOLOPHANE COMPANY, INC.

Lighting Authorities Since 1898 • 342 MADISON AVENUE, NEW YORK 17, N.Y.
THE HOLOPHANE COMPANY, LTD., THE QUEENSWAY, TORONTO 14, ONTARIO

PANEL NAMED TO REVIEW PBS PLANNING STANDARDS

TWO ARCHITECTS AND THREE ENGINEERS have been named by the Public Buildings Service of the General Services Administration to an eight-man advisory committee set up to review PBS planning standards. The committee's recommendations could result in significant revisions of the technical handbooks

supplied by PBS to architects and engineers engaged in Federal building construction.

Earl H. Lundin of New York and George M. Ewing of Philadelphia are the architects on the panel; engineers are Albert L. Baum, Rage Pearson and Archie N. Erickson, all of New York. Other panel members: N. J. Pescatore, New York, and John J. McDermott, Washington, D. C., contractors; and —

as a representative of building management — Earle Schultz of Chicago, former president of the National Association of Building Owners and Managers. W. E. ("Bert") Reynolds, who retired last year after many years as Commissioner of Public Buildings, is serving as consultant.

The committee is expected to submit its recommendations "by the middle of March" — which should mean they will be in hand before the first batch of projects under the government's new lease-purchase program actually gets under way.

PBS Commissioner Peter Strobel has outlined the purposes of the review as follows:

"Essentially, we are taking a long, hard look at our standards. We are getting set, by searching for whatever improvements prove necessary, to meet the pressing needs of the future with economical and efficient construction practices.

"In view of the 15-year ebb in construction of Federal buildings, the government obviously has both worn out and grown out of its clothes. The everyday business of government has created a huge backlog of building needs awaiting the time when large-scale costs will not unduly burden the Federal budget.

"Meanwhile, we are planning limited construction under the new lease-purchase authority to satisfy most urgent requirements. With the competent advice of private industry, we will be able to keep down the cost of our lease-purchase program. Moreover, it will give us the chance to test our improved standards for the larger needs of the future.

Dignity — and Function

"Present practices base the architecture of public buildings on simplicity and dignity. Cornices, elaborate mouldings, and other embellishments have been eliminated in general from Federal architecture largely because they add to construction and maintenance costs. The end product is building designs which are adapted to functions. This basic principle involves policies regarding overall design as well as standards and details employed in carrying out these policies. The consulting group will review both."

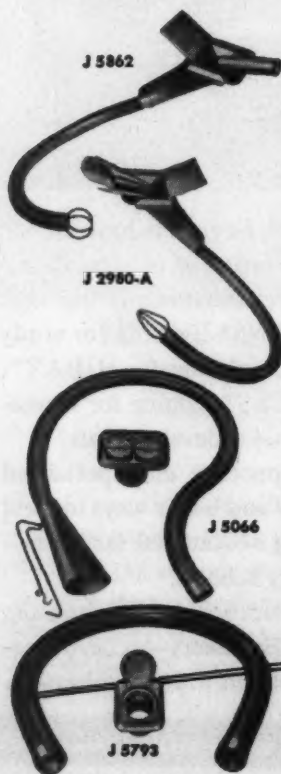
The effort is assisted by L. L. Hunter, supervising architect of PBS, and its chief estimator, C. G. Palmer, who act as liaison with GSA.

(Continued on page 250)

"If theyda specified Monoxivent we wouldn't be havin' this kinda trouble!"



IT PAYS TO *Specify* KENT-MOORE MONOXIVENT EXHAUST ELIMINATING FIXTURES



Nothing matches modern Monoxivent Fixtures for effectively ridding service departments and garages of carbon monoxide fumes! In fact, Monoxivents offer all the advantages "most wanted" in exhaust eliminating systems ... installation economy, operating efficiency, long, trouble-free life ... and no unsightly hoses hanging from overhead, either! Models available to meet your every requirement, too. Want the convenience of underfloor hose storage, for example? Two Monoxivent Sets offer this outstanding feature ... J 2980-A and the new J 5862 "Twinstallation" model that services both single and dual exhaust cars! Looking for economy? Then you can't beat the low-cost J 5066. Or, if trucks are to be serviced, there's the J 5793 ... a special new fixture designed to service all trucks!

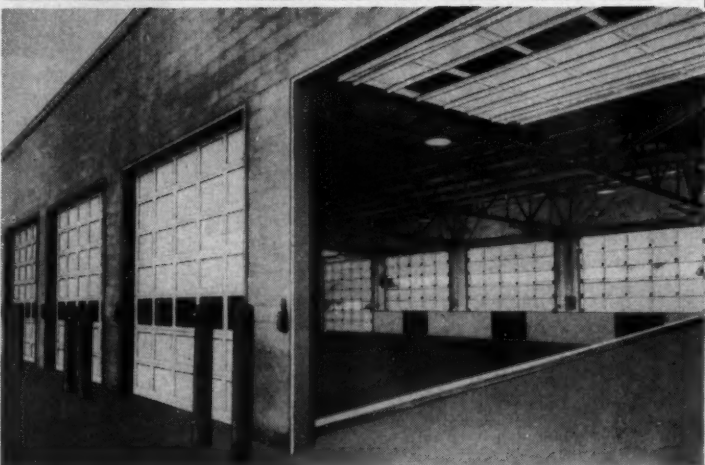
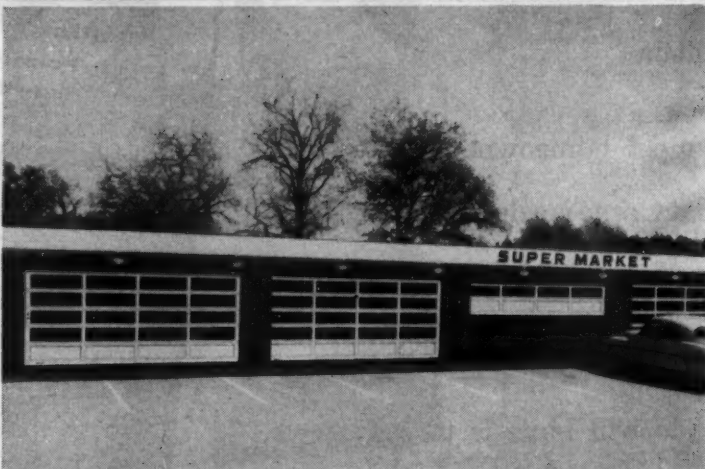
What's more, as the pioneer in the exhaust eliminating field, Kent-Moore offers you FREE technical engineering services to assure proper installation and efficient operation of every Monoxivent fixture. See your nearby Kent-Moore jobber, or write direct for complete information today!

KENT-MOORE ORGANIZATION, INC.

Engineers and Manufacturers of
Special Automotive Service Tools and Equipment
5-105 General Motors Bldg. • Detroit 2, Mich.



a Complete Line of Doors...
a Complete **PRICE RANGE!**



Visit our Booths...

No. 14, Conrad Hilton Hotel, NAHB Convention

No. 388, International Amphitheater
Plant Maintenance and Engineering Show



Residential...

- ★ STANDARD DESIGNS in many sizes
- ★ SPECIAL TRIMS for standard doors
- ★ SPECIAL DESIGNS, raised, routed panels



Commercial...

- ★ Highway Markets and Restaurants ★ Schools
- ★ Service Stations ★ Fire Stations ★ Hospitals
- ★ Institutions ★ Municipal Buildings



Industrial...

- ★ Factories ★ Warehouses
- ★ Loading Platforms ★ Terminals
- ★ Government Buildings ★ Military Structures

OVERHEAD DOOR CORPORATION

GENERAL OFFICES AND MAIN FACTORY • HARTFORD CITY, INDIANA

America's Great Name in
QUALITY DOORS

MANUFACTURING DIVISIONS:

HILLSIDE, NEW JERSEY CORTLAND, NEW YORK OKLAHOMA CITY, OKLAHOMA
NASHUA, NEW HAMPSHIRE LEWISTOWN, PENNSYLVANIA DALLAS, TEXAS PORTLAND, OREGON

© 1955, O.D.C.

NATION-WIDE SALES • INSTALLATION • SERVICE

CRANE IS ADVERTISING TO YOUR CLIENTS IN **LIFE**

Crane's 1955 advertising campaign in Life magazine is aimed squarely at your home-building clients—the new, young generation of homemakers.

We're telling them what most homeowners (and most architects) already know—that Crane is a dependable manufacturer with 100 years of experience, and that Crane today is the preferred plumbing; for design, for quality, for value.

One of the effects these ads will have is to help your clients appreciate that when you specify Crane in your plans, you are giving them the best.

CRANE CO., General Offices: 836 South Michigan Avenue,
Chicago 5, Illinois

VALVES • FITTINGS • PIPE • KITCHENS • PLUMBING • HEATING

CRANE

CRANE
STARTS ITS
SECOND CENTURY
OF QUALITY
Founded
July 4, 1855

"COURTESY" LAVATORY FITS INTO

"You can see we didn't cut any corners," says the builder—and that's exactly what the Crane sign tells you. In fact, more architects, plumbing contractors, and builders agree that Crane is the finest—beauty of design, convenience of use, precision engineering, and long life. With Crane you know your whole house is quality through-

CRANE CO.
VALVES • FITTINGS • PIPE
KITCHENS • PLUMBING • HEATING

CRANE

When you're in the market for a new house

Look in the bathrooms for the answer to these questions:

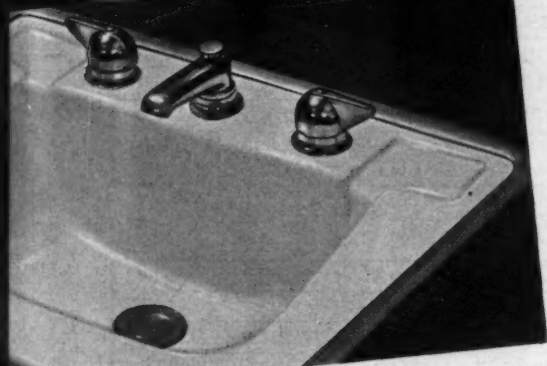
"How well built is this house?"

"What will it be worth 10 years from now?"

Because—the bathrooms are where a house first shows its age. If the name on the fixtures is Crane, you have design that is advanced today and modern tomorrow—thanks to famed designer, Henry Dreyfus.

So Crane bathrooms are more than the most desired in beauty and good taste. They are "value insurance" that will help keep your new home looking new longer.

Ask your Crane Plumbing and Heating Dealer about the wide selection of fixtures in the Crane line.



CRANE COUNTERTOP. READY TO INSTALL. PRICES START AT \$39.45 (Suggested Consumer Price)

"CRITERION" LAVATORY EITHER FITS INTO COUNTERTOP OR STANDS ALONE. READY TO INSTALL. PRICES START AT \$104.90 (Suggested Consumer Price)



Crane's Centennial Advertising Campaign in Life Magazine is one of the largest in plumbing history. More than 65,000,000 people will read about Crane in 1955.

**CRANE STARTS
ITS SECOND CENTURY
OF QUALITY
Founded July 4, 1855**

THE RECORD REPORTS

CONSTRUCTION COST INDEXES

Labor and Materials

U. S. average 1926-1929=100

Presented by Clyde Shute, manager, Statistical and Research Division,
F. W. Dodge Corp., from data compiled by E. H. Boeckh & Assoc., Inc.

NEW YORK

Period	Residential		Apts., Hotels Office Bldgs. Brick and Concr.	Commercial and Factory Bldgs. Brick and Brick and Concr. Steel		Residential	Apts., Hotels Office Bldgs. Brick and Concr.	Commercial and Factory Bldgs. Brick and Brick and Concr. Steel	
	Brick	Frame		Brick	Steel	Brick	Frame	Brick	Steel
1930	127.0	126.7	124.1	128.0	123.6	82.1	80.9	84.5	83.6
1935	93.8	91.3	104.7	108.5	105.5	72.3	67.9	84.0	85.1
1939	123.5	122.4	130.7	133.4	130.1	86.3	83.1	95.1	94.7
1940	126.3	125.1	132.2	135.1	131.4	91.0	89.0	96.9	97.5
1946	181.8	182.4	177.2	179.0	174.8	148.1	149.2	136.8	135.1
1947	219.3	222.0	207.6	207.5	203.8	180.4	184.0	158.1	158.0
1948	250.1	251.6	239.4	242.2	235.6	199.2	202.5	178.8	178.8
1949	243.7	240.8	242.8	246.4	240.0	189.3	189.9	180.6	177.5
1950	256.2	254.5	249.5	251.5	248.0	194.3	196.2	185.4	185.0
1951	273.2	271.3	263.7	265.2	262.2	212.8	214.6	204.2	205.0
1952	278.2	274.8	271.9	274.9	271.8	218.8	221.0	212.8	214.3
1953	281.3	277.2	281.0	286.0	282.0	223.3	224.6	221.3	223.0
Aug. 1954	285.4	278.0	294.1	302.3	296.7	219.3	218.5	224.1	226.5
Sept. 1954	285.4	278.0	294.1	302.3	296.7	219.7	218.9	224.6	226.9
Oct. 1954	285.4	278.0	294.1	302.3	296.7	220.2	219.7	225.0	227.1
Oct. 1954	131.0	127.1	% increase over 1939		125.0	126.6	128.0	% increase over 1939	
						155.1	164.3	136.5	132.6

ATLANTA

ST. LOUIS

1930	108.9	108.3	112.4	115.3	111.3	90.8	86.8	100.4	104.9	100.4
1935	95.1	90.1	104.1	108.3	105.4	89.5	84.5	96.4	103.7	99.7
1939	110.2	107.0	118.7	119.8	119.0	105.6	99.3	117.4	121.9	116.5
1940	112.6	110.1	119.3	120.3	119.4	106.4	101.2	116.3	120.1	115.5
1946	167.1	167.4	159.1	161.1	158.1	159.7	157.5	157.9	159.3	160.0
1947	202.4	203.8	183.9	184.2	184.0	193.1	191.6	183.7	186.8	186.9
1948	227.9	231.2	207.7	210.0	208.1	218.9	216.6	208.3	214.7	211.1
1949	221.4	220.7	212.8	215.7	213.6	213.0	207.1	214.0	219.8	216.1
1950	232.8	230.7	221.9	225.3	222.8	227.0	223.1	222.4	224.5	222.6
1951	252.0	248.3	238.5	240.9	239.0	245.2	240.4	239.6	243.1	243.1
1952	259.1	253.2	249.7	255.0	249.6	250.2	245.0	245.6	248.7	249.6
1953	263.4	256.4	259.0	267.6	259.2	255.2	257.2	256.6	261.6	259.7
Aug. 1954	265.5	258.8	265.1	274.9	268.2	259.9	251.7	266.4	275.7	269.5
Sept. 1954	265.5	258.8	265.1	274.9	268.2	259.9	251.7	266.7	275.9	270.1
Oct. 1954	265.5	258.8	265.1	274.9	268.2	260.6	252.6	266.8	276.0	270.3
	% increase over 1939					% increase over 1939				
Oct. 1954	140.9	141.8	123.3	129.4	125.3	146.7	154.3	127.2	126.4	132.0

SAN FRANCISCO

The index numbers shown are for combined material and labor costs. The indexes for each separate type of construction relate to the United States average for 1926-29 for that particular type — considered 100.

Cost comparisons, as percentage differences for any particular type of construction, are possible between localities, or periods of time within the same city, by dividing the difference between the two index numbers by one of them; i.e.:

index for city A = 110
index for city B = 95
(both indexes must be for the same type of construction).
Then: costs in A are approximately 16 per cent higher than in B.

$\frac{110-95}{95} = 0.158$
Conversely: costs in B are approximately 14 per cent lower than in A.
 $\frac{110-95}{110} = 0.136$

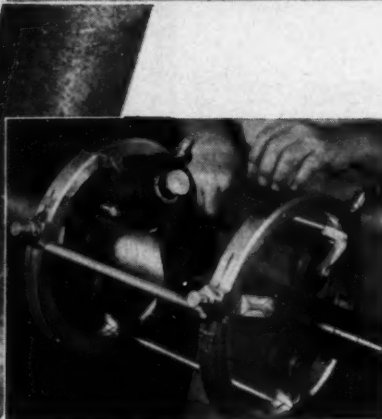
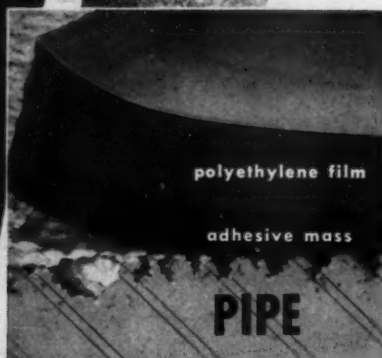
Cost comparisons cannot be made between different types of construction because the index numbers for each type relate to a different U. S. average for 1926-29.

Material prices and wage rates used in the current indexes make no allowance for payments in excess of published list prices, thus indexes reflect minimum costs and not necessarily actual costs.

These index numbers will appear regularly on this page.

POLYETHYLENE PROTECTION YOU WRAP ON!

Polyken Protective Tape Coatings
Control Corrosion
more efficiently and with less work!



GREATER EFFICIENCY

Here's why *Polyken* Protective Tape Coatings provide more efficient protection:

- *Preformed* plastic film coating . . . manufactured by a controlled process from reproducible raw materials to assure uniform coatings every time.
- *Polyethylene* coating consisting of tough, oriented, elastic film . . . recognized for its excellent resistance against corrosive attack, its resistance to moisture, and its high dielectric strength.
- *Bonded* securely by a stable adhesive, a durable protective barrier in itself.

LESS WORK

Apply this *Polyken* Protective Tape Coating *right off the roll*. Requires no heat, liquids, solvents or thinners. Eliminates drying time, clean-up time and shut-down time. Even inexperienced workmen can apply it at 20 to 30 feet per minute by machine. Goes on tightly and evenly.

Polyken Tape Protective Coating available in two thicknesses
— 12 mil black No. 8900 and gray No. 910; 20 mil No. 920.

Polyken[®] Controlled Strength

PROTECTIVE COATINGS

Polyken Products Department of the Kendall Company

Polyken, Dept. AR-A
222 West Adams St., Chicago 6, Illinois

Please send me samples and further information on **POLYKEN PROTECTIVE TAPE COATINGS**.

Name _____ Title _____

Company _____

Street Address _____

City _____ Zone _____ State _____



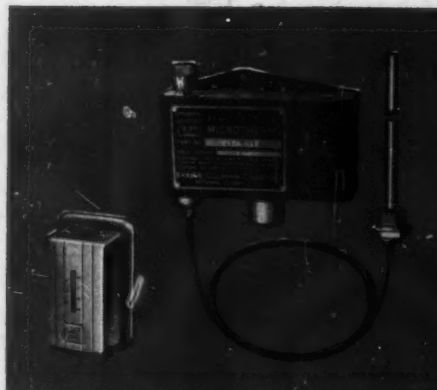
**ELECTRIC-
ELECTRONIC**

Automatic Controls

... better control

... electrically!

The swing is to electric and electronic controls for modern buildings . . . and here's why! Remarkable sensitivity, plus the inherent positive positioning of proportioning controls, assure greater accuracy. Modern electric controls maintain temperature "right on the nose" night and day, for years on end. On zone jobs, outdoor sensing elements react to weather changes . . . keep operating costs at a minimum. "Control Centers" slash costs of installation, checking, and servicing . . . simplify layout of individual systems. Costs of long runs between systems are avoided, since power lines can be tapped practically anywhere. By installing wires in conduit, possibility of damage to control lines is eliminated, revisions can be made without tearing out walls, and quality of installation is above comparison. With the reliability of electrical devices proved in all aspects of our modern life . . . and with ceaseless research marking important advances in electric controls . . . no wonder the word is "better control . . . electrically"!



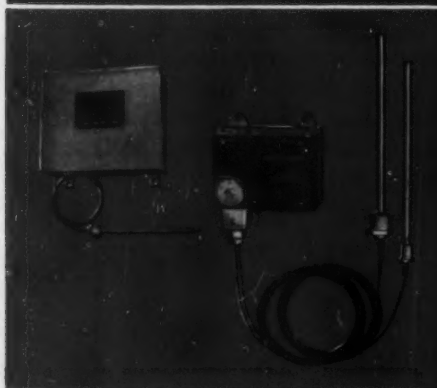
THERMOSTATS—single and two-stage room and remote bulb thermostats for on-off control, room and remote bulb thermostats for proportioning control.



MOTOR-OPERATED VALVES—a complete line of factory-assembled, motor-operated valves for two-position and proportioning control. Wide range of sizes and types.



CONTROL MOTORS—spring return, unidirectional, reversible, multi-position, and proportioning types. Program switches for multiple step control of compressors, pumps, etc.



OUTDOOR RESET CONTROLS—both fixed and adjustable ratio outdoor reset hot water controls applicable to any size building, from a single office to a multi-story skyscraper.



ELECTRONIC CONTROLS—on-off or fully proportioning. Extremely sensitive and flexible control of air or liquid temperature. Large, legible, easily understood dials.



ECONOSTAT ZONE CONTROL—outdoor-indoor zone control for multi-occupancy buildings. Night depression with automatic morning warm-up. Optional week end cutoff.



WANT MORE INFORMATION? Up-to-the-minute literature, complete with all necessary design data, is available on all Barber-Colman Automatic Controls, as well as on modern types of control systems. Call nearby Field Office, or write us for data bulletins on *your* project.

Shown here are just a few types of modern electric and electronic controls available from Barber-Colman. Our company has a remarkable background in design, engineering, and production of fine equipment . . . our field staff has no peer in solving application problems. Come to us for answers to any questions about temperature control . . . you'll get "better control . . . electrically"!

BARBER-COLMAN COMPANY

Dept. M, 1304 Rock Street, ROCKFORD, ILL., U.S.A. • Field offices in principal cities

Automatic Controls • Air Distribution Products • Industrial Instruments
Aircraft Controls • Small Motors • Overdoors and Operators • Molded Products • Metal Cutting Tools • Machine Tools • Textile Machinery



**"UNI-FLO"
ENGINEERED**

Air Distribution

**...modern, versatile
...for better jobs**

What happens when conditioned air enters a room marks the difference between success and failure of a complete job. If there are drafts, uneven distribution, or noisy operation at point of room entry, the entire system is condemned. On the other hand, if air is delivered efficiently, unobtrusively, quietly, the whole job is lauded. The one way to write an insurance policy on satisfaction with each job is to specify the finest available air distribution equipment. Then you know you will get the best possible results from the entire system, free from troublesome and costly service calls. At the same time, you assure yourself of proved designs which are easier to install, harmonize beautifully with modern surroundings, last a lifetime. In the Uni-Flo line you get all these advantages, plus many exclusive developments. Choose from this wide selection:

<p>GRILLES, REGISTERS—available with a wide variety of frame styles and core designs to meet all wall and door installation requirements. Wide selection of finishes.</p>	<p>CEILING DIFFUSERS—Venturi-Flo units provide adjustable air patterns in a complete range of sizes. Minimize ceiling smudge. Available with integral lighting.</p>	<p>SQUARE, RECTANGULAR DIFFUSERS—to match acoustical ceiling designs. Adjustable air patterns... exclusive with Uni-Flo. Surface or recessed types. Minimize ceiling smudge.</p>
<p>HIGH VELOCITY UNITS—control units and air valves reduce high velocity, high pressure air to conventional flow. Available with sidewall or ceiling diffusers and to supply air to branch ducts.</p>	<p>UNI-FLO ACCESSORIES—unique Uni-Flo developments for more efficient handling of air in ducts, grilles, registers, diffusers. Assure even air distribution, easier system balance.</p>	<p>LINE-O-FLO CEILING DIFFUSERS—provide uniform air distribution over entire length of linear units. Supplied with or without integral fluorescent lighting fixtures.</p>

BLAZING THE TRAIL TO BETTER AIR DISTRIBUTION

When Barber-Colman entered the air distribution field, almost twenty years ago, we found meager and incomplete selection data. Up to then, rule-of-thumb methods were in common use. "Guesstimating" was accepted practice in determining sizes and proportions of the opening; the grille in most cases was added merely for decorative purposes.

In our research laboratory, every possible condition of air distribution was simulated. Results were tabulated and compiled into usable application data bulletins. Today, this time-proved information is used by architects, engineers, and contractors to determine

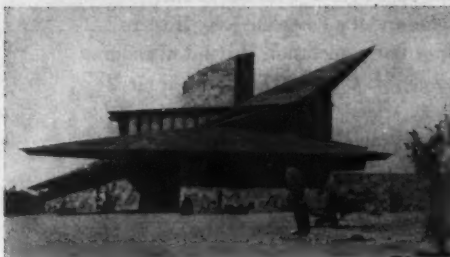
exact requirements for each application.

From our research laboratory, too, come such outstanding "firsts" as opposed-blade volume control and air flow balancing devices; air turning equipment; adjustable ceiling outlets; high velocity air valves... to mention only a few.

Today, Barber-Colman's certified data is available to you from our nearby Field Office. Phone or write us for information on any type of air distribution device, or for engineering help. Specify Barber-Colman and be sure!

BARBER-COLMAN COMPANY, Dept. M, 1104 Rock Street., ROCKFORD, ILLINOIS

REQUIRED READING



The Natural House. By Frank Lloyd Wright. Horizon Press (New York, N. Y.) 1954. 223 pp, illus. \$6.50

By EMERSON GOBLE

In this book the master turns his ingenuity to the small house, the economical house. Wright calls it the Usonian Automatic; a newspaper reporter calls it the U-Drive-it house. The book, incidentally, is timed to coincide with the opening by Wright of a New York office for the purpose of pushing his pour-it-yourself scheme.

Along with the ingenuity the author dispenses the expected quantity of pronouncements, naturally the same pronouncements long familiar to avid Wright readers (like me). Much of the material is, in fact, taken from earlier writings. There are, however, new portions, particularly those presenting the Usonian Automatic.

More importantly, the book presents a number of houses, some not previously published, and all carefully chosen to show how the talents are used in the low-cost house. Houses are shown in plan and photograph, and captioned with cost and date.

One of them is the Jacobs House, prototype for the Usonian, built in Madison, Wis., in 1937, for \$5,500 including architects fee of \$450. This, incidentally, is the first house to have Wright's "gravity" heat, the system commonly known today as "radiant" heating. Wright objects, you know, to its being called radiant — "it was simply gravity heat — heat coming up from beneath as naturally heat rises." He tells an interesting story of how he came upon the principle in Japan, when he was entertained in a "Korean" room, which had tile ducts under the floor through which heat from an outside fire was circulated.

In a rambling, Wrightian way the book follows a topical outline, covering the elements of house planning in small individual pronouncements — roof, basement ("a noisome, gaseous damp place"), attic ("never plan waste space"), orientation, sunlight, space, — pretty much right through the usual list. A list of his own inventions in the house field would be

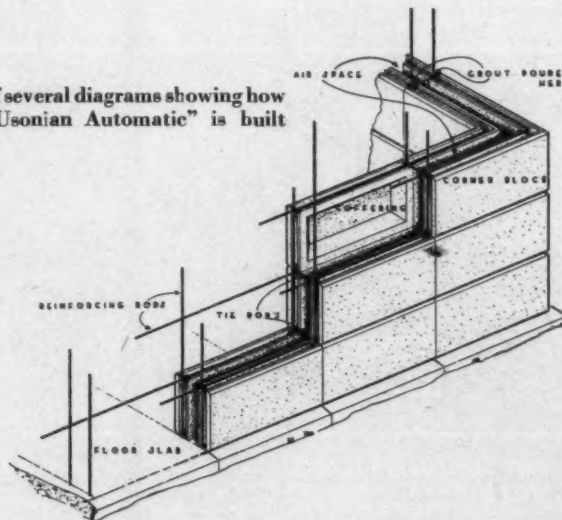
FLIW TELLS HOW TO BUILD YOUR OWN

long. Even the typical Wright outburst on furnishings and decorating. He is frank about chairs — "all my life my legs have been banged up somewhere by the chairs I have designed. But we are accomplishing it now. Someday it will be well done."

The organic theme runs through the book, the integral ornament — "imagination giving natural pattern to structure itself." But the book doesn't devote much space to the tilting at favorite enemies; there are only casual slaps at "the machine for living" or the "boxment." There are some jabs at "the expedient houses built by the million, which journals propagate, and government builds. . . . To me such houses are stupid makeshifts, putting on some style or other, really having no integrity. Style is important. A style is not. There is all the difference when we work *with* style and not for a style."

Perhaps what is most admirable about Wright in his books is his stout affirmation of architecture. This makes you forget his dramatics, forgive his arrogance. Very few sell architecture like he does.

One of several diagrams showing how the "Usonian Automatic" is built



THE WORK OF ALVAR AALTO

Finnish Architecture and Alvar Aalto. By Ed. and Cl. Neuenschwander. Frederick A. Praeger (105 W. 40th St., New York, N. Y.) 1954. 192 pp, illus.

A series of historical and cultural sketches by Kaarlo Olsonen, Paul Bernoulli and the Neuenschwanders about the origins of Finnish architecture along with examples of outstanding buildings done by various architects, prefaces the main part of this instructive book. The primary concern is with the presentation of the great works and projects completed by Alvar Aalto from 1950 to 1952 as well as numerous of his

earlier buildings. With a brief text (the commentary is in English, French and German) and through many excellent photographs, sketches and plans the authors have shown how Aalto's creative power has put its imprint on the Finnish landscape and Finnish living.

"Water and rocks, boats, the huts of the fishermen, the daily means of getting food and preparing it are a constant emotional stimulus to the imagination."

This ever-present stimulus is shown to provide basic in-

Continued on page 288
More books on page 48

Rolling Steel Doors

Manually, Mechanically, or Electrically Operated

Here is another shipping dock application in which no other type of door could meet the operating space requirements. In three openings, 38'-0" x 14'-0", at the entrance to an enclosed subterranean shipping dock located off a vehicular tunnel under "Northland"—Hudson's fabulous new shopping center in Detroit's northwest section—three Mahon Power Operated Rolling Steel Doors provide the quick, timesaving operation, the permanence, the firesafety, the security, and the space conservation demanded in this unusual motor freight handling facility. The quick, vertical roll-up action of rolling steel doors occupies no usable space either inside or outside the opening—floor space is usable to within a few inches of the door curtain on either side . . . and, there are no overhead tracks or other obstructions to interfere with crane handling adjacent to the door opening. The permanent all-metal construction of rolling steel doors means less maintenance, provides greater protection against intrusion and fire, and assures you a lifetime of trouble-free service with convenient local or remote electrical control stations. When you select a rolling steel door, check specifications carefully . . . you will find in Mahon Rolling Steel Doors some exclusive and very desirable features in operating mechanisms, bearings, and other parts and materials which add up to a greater over-all value. See Sweet's Files for complete information, or write for Mahon Catalog No. G-55.

THE R. C. MAHON COMPANY

Detroit 34, Michigan • Chicago 4, Illinois • Representatives in all Principal Cities
Manufacturers of Rolling Steel Doors, Grilles, and Automatic Closing Underwriters' Labeled
Rolling Steel Fire Doors and Fire Shutters; Insulated Metal Walls and Wall Panels;
Steel Deck for Roofs, Partitions, and Permanent Concrete Floor Forms.



Three Mahon Power Operated Rolling Steel Doors, 38'-0" x 14'-0", at the entrance to an enclosed subterranean shipping dock off a vehicular tunnel under "Northland"—The J. L. Hudson Company's new shopping center, Detroit. Victor Gruen & Associates, Architects. Bryant & Detwiler, General Contractors.

MAHON



THE FACTS OF LIGHT

and THOMPSON
Servisafe
POLE UNITS

FACT NO. 1: ONLY "SERVISAFE" UNITS PERMIT GROUND LEVEL MAINTENANCE FOR POLE-MOUNTED LUMINAIRES. A disconnecting and lowering hanger mechanism allows workman to lower luminaire for servicing and then reposition it with minimum effort and complete safety.

FACT NO. 2: ALL SERVICING HAZARDS ARE ELIMINATED. Workman has both feet on the ground and both hands on the job at all times. In addition, lowered fixture is "dead" because live contacts remain at pole top.

FACT NO. 3: SERVICING TIME AND COSTS ARE REDUCED TO MINIMUM. One man, using only a light vehicle, now can maintain pole-mounted luminaires in a fraction of the time formerly required. Faster servicing and elimination of costly auxiliary equipment assures substantial savings as well as increased lighting efficiency.

FACT NO. 4: "SERVISAFE" POLE UNITS ARE SUPPLIED AS COMPLETE PACKAGES READY FOR WIRING AND ERECTING. Featuring decorative as well as functional qualities, both single and double-arm models can be furnished with a variety of new steel and aluminum poles. "Servisafe" Bracket Units for wall and wood pole mountings also are available.



Write for Bulletin WPH-54
for additional
details.

THE THOMPSON ELECTRIC CO.

1199 POWER AVENUE • CLEVELAND 14, OHIO

REQUIRED READING

(Continued from page 46)

WALTER GROPIUS

Walter Gropius. By S. Giedion. Reinhold (New York, N. Y.) 1954. 8 in. by 10 in. 250 pp, illus. \$10.00.

SIGFRIED GIEDION HAS WRITTEN a biography of Walter Gropius. The author of the architectural students' manual "Space, Time and Architecture" has treated the story of his friend with characteristic thoroughness. It is a good book: easy and interesting to read, well indexed and documented, with many illustrative photographs.

The conclusion to be drawn from the biography of Gropius is that he was one of the leaders in interpreting the impact of the industrial revolution in terms of architecture. It becomes evident that Gropius is a man of big ideas that cover many facets (education, theater, industry, housing, prefabrication, slab apartment blocks and city planning) and that although he instinctively perceives the solutions to the problems, he laboriously works them out by means of painfully exact calculations. He is more interested in achieving a result than in seeing his name in lights — teamwork is a result of his philosophy and the basis of his developments.

The development of the Bauhaus at Dessau was explained by Mies van der Rohe as "an idea" — and Giedion elaborates — "an attempt to bridge the gulf between the world of the spirit and the world of every day, between art and industrial production. The whole endeavor of the Bauhaus was to discover similarities between the two conflicting spheres and to make them generally known . . ." In spite of great opposition the team of Gropius (the leader), Albers, Klee, Kandinsky, Itten and Moholy-Nagy have spread the work throughout the world.

Giedion writes a nice piece on City Planning too — asserting that "Town Planning and Democracy have a common basis: the establishment of an equilibrium between individual freedom and collective responsibility." He presents Gropius' major projects for Berlin and Boston's Back Bay as examples.

But to this reviewer the most exciting aspect of Gropius' biography comes with the realization that the characteristics of this man's creative development are only a part of the whole creative development of our age — that at the same time men like Wright, Corbusier, Mies, Nowicki and Buckminster

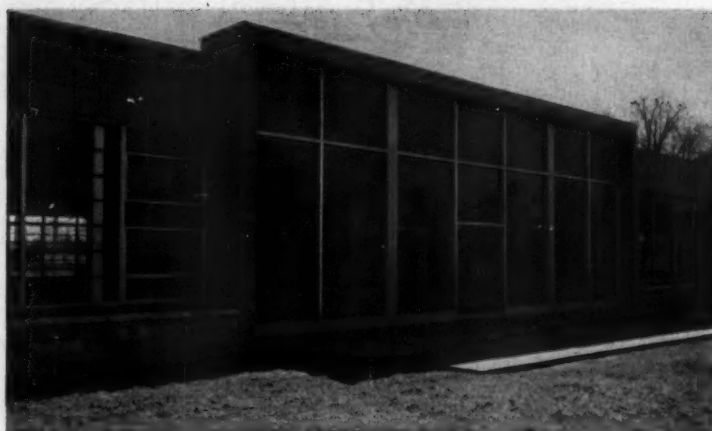
(Continued on page 288)

What's
the
difference
between
Architectural
Terra Cotta →
and
Ceramic
Veneer? →



**YONKERS
PUBLIC SCHOOL #30**
FLEETWOOD, N. Y.
Edward Fleagle
—Architect
Frank Angelilli
Construction Co., Inc.
—Builder

Spandrels 3'7" wide
and 163' long are com-
posed of Architectural
Terra Cotta units
approximately 21" x
24". Color is a light
mottled green.



**POTTER
AERONAUTICAL
FACTORY**
UNION, NEW JERSEY
Stephen J. Potter
—Architect
The Forber Company
—Builder
Ceramic Veneer units,
1 1/4" thick, are
aquamarine in color.

Machine-made terra cotta with a maximum overall thickness of 1 1/4", in individual slabs not to exceed 540 sq. in., is referred to as Ceramic Veneer. It requires no metal anchorage...adhesion of the mortar to the Ceramic Veneer body and the masonry backing creates a monolithic wall. Anchor type Ceramic Veneer is also available.

Architectural Terra Cotta, anchor type, in thicknesses exceeding 1 1/4", is recommended where the architect desires large scale slabs up to face sizes not exceeding 26" x 36". Ribs or scoring are pro-

vided on the backs of such units.

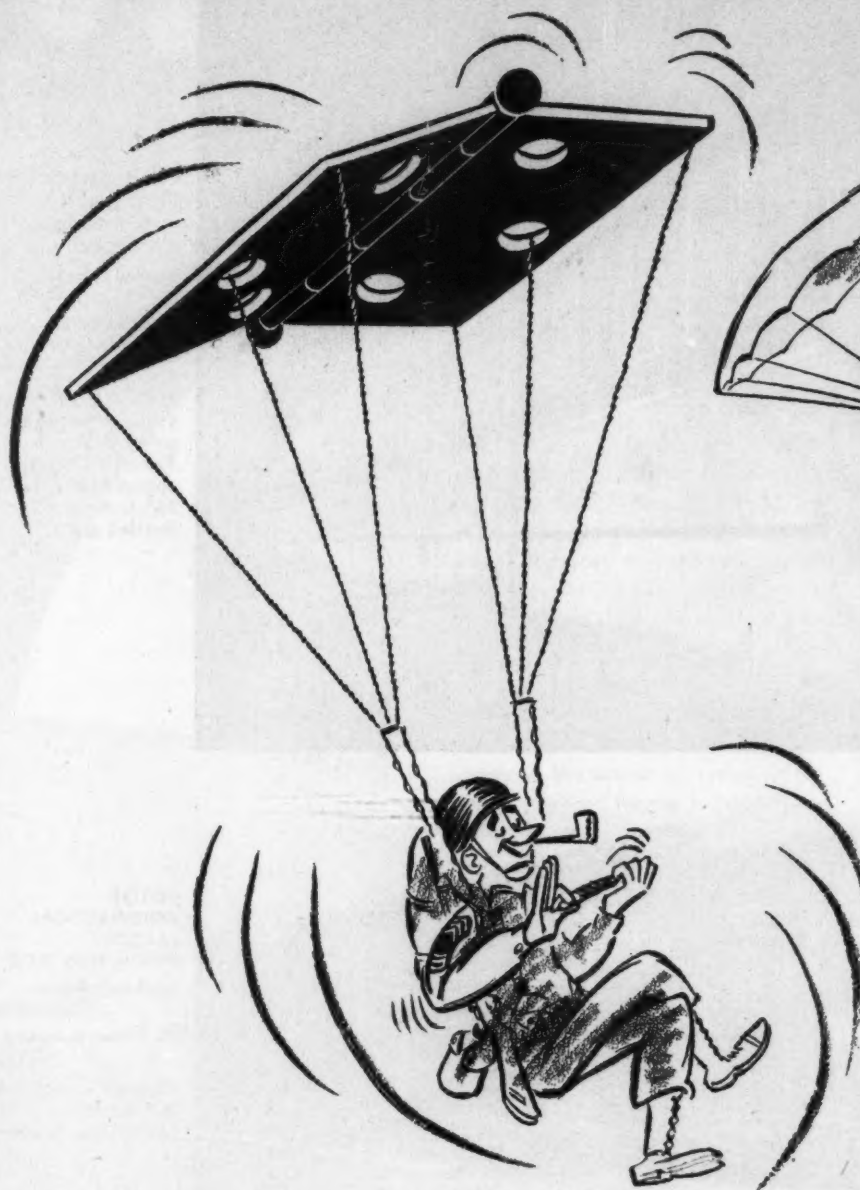
Both Architectural Terra Cotta and Ceramic Veneer are custom-made in an unlimited range of colors and textures for interiors or exteriors. Simple soap-and-water washings retain original richness and beauty while assuring minimum maintenance.

Construction detail, data, color samples, estimates, advice on preliminary sketches, will be furnished promptly without charge on Architectural Terra Cotta and Ceramic Veneer.



FEDERAL SEABOARD TERRA COTTA CORPORATION

10 East 40th Street, New York 16, New York
PLANTS AT PERTH AMBOY AND SOUTH AMBOY, NEW JERSEY



"EVERYTHING HINGES ON HAGER!"*

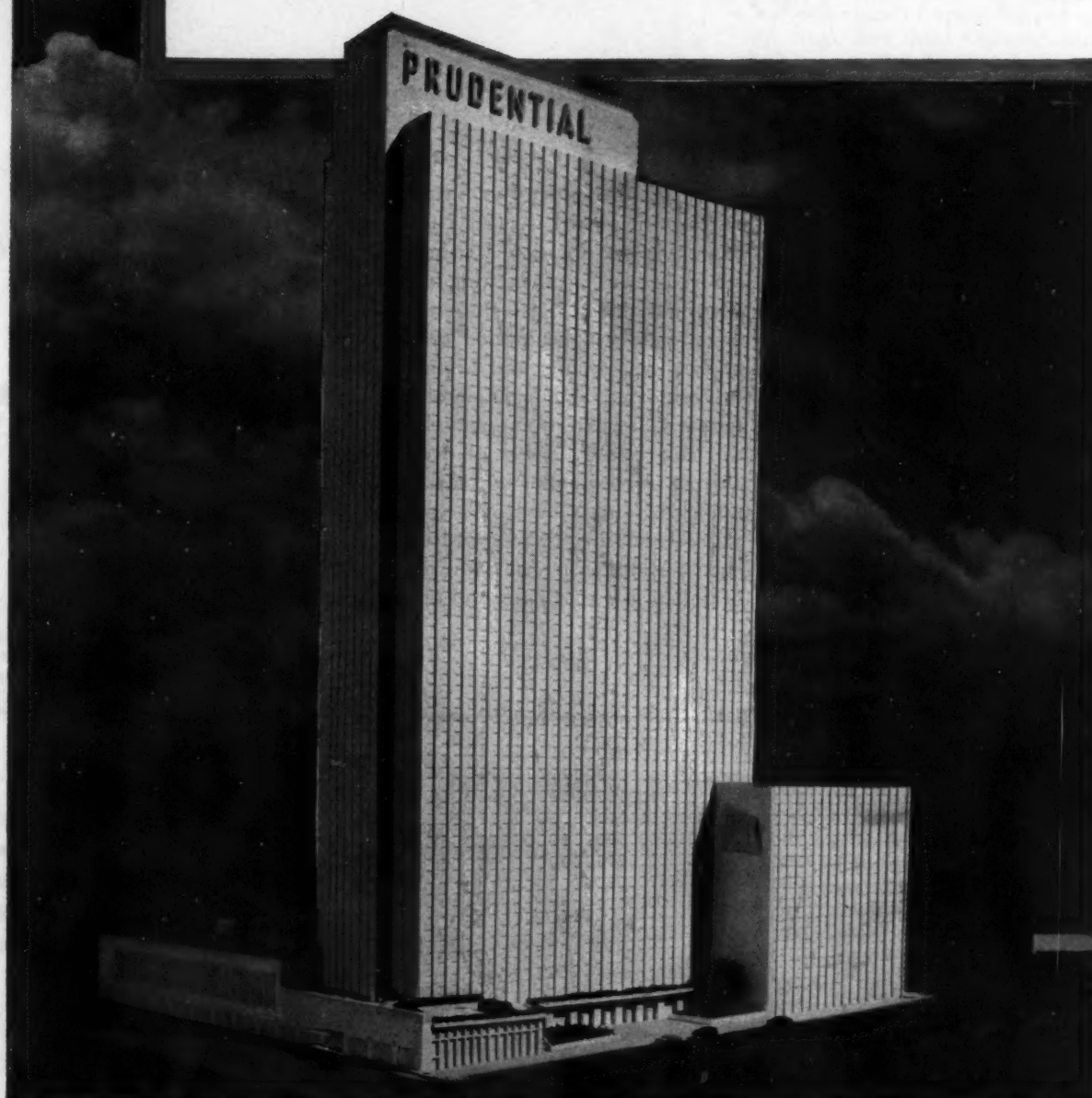
FREE! If you enjoyed laughing at Herb Brammeier's mirth-making cartoon this month, send for Hager's new book containing 28 full-size popular "Everything Hinges on Hager" cartoons! It's FREE! Just address



*®

C. Hager & Sons Hinge Mfg. Co. • 139 Victor Street • St. Louis 4, Mo.
Founded 1849—Every Hager Hinge Swings on 100 Years of Experience

**Honeywell Electronics will save
thousands of dollars in the
world's most modern building**



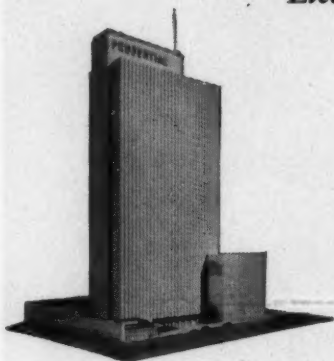
Model of the Mid-America Home Office of The Prudential Insurance Company now under construction in Chicago. Architects and Engineers: Nass & Murphy, Chicago. General Contractor: George A. Fuller Co.; Air Conditioning and Refrigeration Contractor: William A. Pope Co.; Heating Contractor: H. P. Reger & Co.; Ventilating Contractors: R. B. Hayward Co. and Jamar-Olmen Co.; Electrical Contractors: Fischbach, Moore and Morrissey, Inc., Emerson-Comstock Co., Inc., J. Livingston & Co., Air Conditioning by Carrier Corporation. Rental Agent: L. J. Sheridan & Co., Chicago.



Continued from preceding page

Honeywell Electronic Air C means impressive e

Electronic Controls will save thousands of dollars

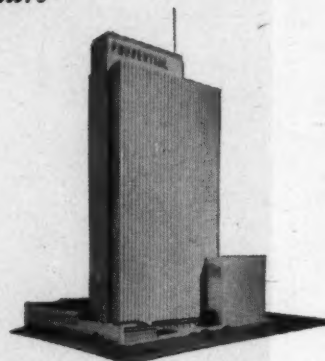


Without Honeywell Electronic Control 203

CHECK POINTS

203 points would have to be checked and adjusted at the individual control sites.

Heart of the electronic master control system will be a basement control panel. From this one location a trained operator can read and adjust the setting of 203 master electronic thermostats—all *remotely*. These thermostats will be located on the water, primary air, cooling and heating systems. It is estimated the integration of the control system with the electronic controls and panels will eliminate 2 degrees of overheating, 2 degrees of overcooling and make checking, calibrating and maintenance easier, simpler, and considerably less expensive. This will make possible an annual saving of thousands of dollars in maintenance and operation.

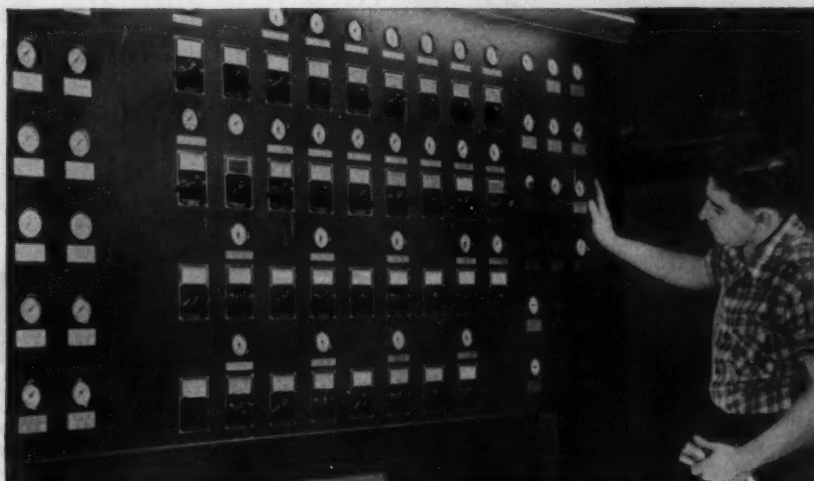


With Honeywell Electronic Control 1

CHECK POINT

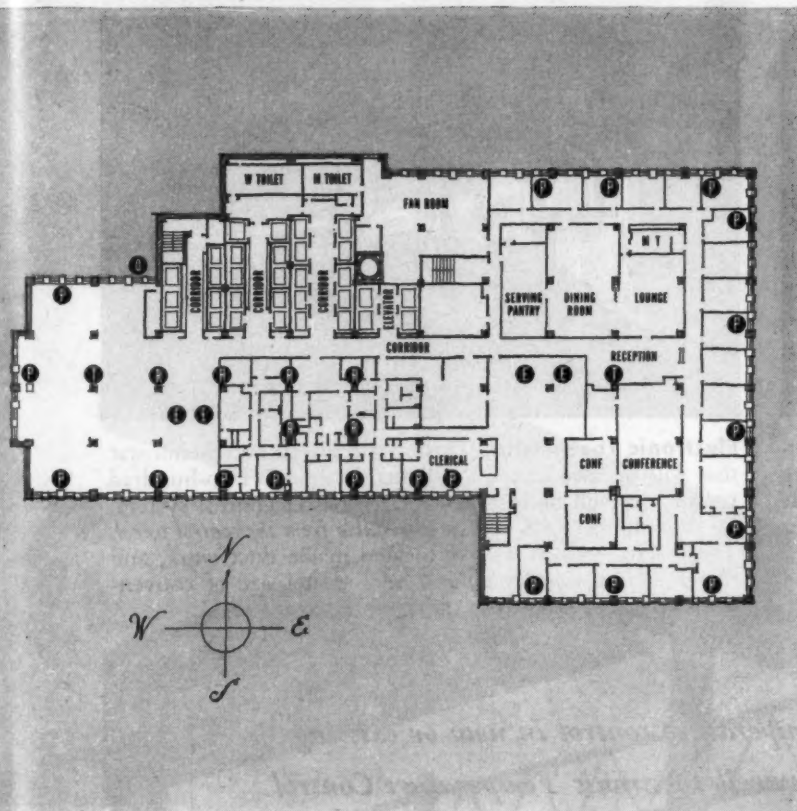
An operator at a panel in the basement will be able to check and *adjust* all 203 stats remotely.

From a single control panel in the basement (a typical panel is shown here), an operator will check and *adjust* the indoor weather throughout the huge building. He'll do it by pushing a button to check, and moving a knob if adjustment is necessary. Development of electronic controls has made such scientific control possible. Only from Honeywell can you obtain the electronic controls and the instrumentation to provide such performance.



Conditioning Control

economy of performance, maintenance



- T** ELECTRONIC INDICATION
- P** PNEUMATIC UNIT THERMOSTAT
- E** ELECTRONIC DUCT THERMOSTAT
- R** ELECTRIC ROOM THERMOSTAT
- O** OUTDOOR ANTICIPATOR

Strategic location of thermostats is indicated by the letters on the floor plan. "E" stands for electronic, "P" for pneumatic, "R" for electric and "T" for electronic indicating thermostat.

The function of the electronic controls is explained on the left hand page.

The pneumatic *room* thermostats you see here will guard comfort in individual offices around the perimeter of the building. The electric thermostats will control temperature in inner offices. The electronic indicating thermostats will be connected to the basement control panel.

OFFICE BUILDING comfort and efficiency will come of age—*electronic age*—when the huge new Mid-America Home Office building of The Prudential Insurance Company of America is completed in Chicago.

For super-sensitive electronic air conditioning controls will mastermind the ideal indoor weather to be provided throughout the building by Honeywell Customized Temperature Control.

These electronic controls, developed by Honeywell after years of research and testing, are far more sensitive than ordinary controls. Yet they're far simpler in construction, have no moving parts to get out of order.

Over a period of just a few years electronic master controls in the Prudential building will pay for themselves—at an estimated yearly rate of saving of 27% of the original cost. How this saving will be made is explained at left.

As in every building with Honeywell Customized Temperature Control, all controls in the Prudential building will be part of an integrated system.

All thermostats will play an important role in combatting use and occupancy comfort problems.

Another function these strategically placed thermostats will easily handle is exposure compensation. If the wind from Lake Michigan to the east is strong and cold, thermostats on that side will call for more heat. And when the summer sun beats down on the south face of the building, thermostats *there* will call for more cooling.

Of greatest significance, however, to the future of comfort controls in the buildings of America is the *electronic* phase of the Prudential installation. It will set the pattern for years to come.

The Electronic Temperature Control

story of the new Prudential building

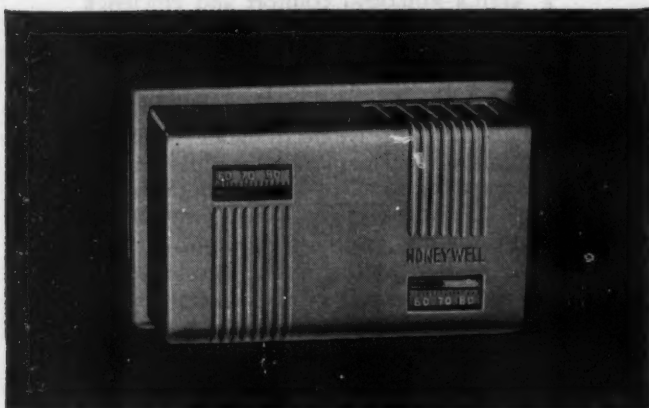
continues on the next page



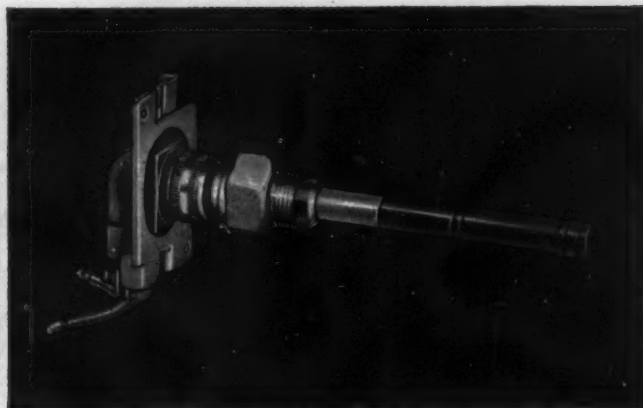
Continued from preceding page

Honeywell Electronic Air Conditioning Control for the new Prudential building in Chicago

Here are the thermostats that will be used



Room Thermostat. This is the famous Honeywell Pneumatic Grad-U-Stat. It will control both heating and cooling in rooms of the 41-story Prudential building. Visible on the wall, it will allow tenants and employees to adjust the temperature to meet particular *room* conditions. To see how these thermostats will be located, refer to the floor plan on the preceding pages.



Electronic Thermostat. This is the electronic thermostat that will be used in the Prudential building. Two-hundred seventy-six will be installed in the master control system. Of this number, 203 will be *adjustable from the control panel*. These stats—which will be located inside duct work, and therefore not seen by tenants—are $\frac{1}{3}$ the size of conventional stats, yet are many times more sensitive.

*For the finest, most modern temperature control in new or existing
buildings—of any size—use Honeywell Electronic Temperature Control*

Whether it's an office building, shopping center, factory, motel, hospital, school—or any size building—new or existing, Honeywell Electronic Temperature Control can help you give your clients the finest control in the world.

This includes control of heating, ventilating and air conditioning. And it includes control

of processing—to help make industrial clients' operations more efficient.

Your clients will not only enjoy more comfort and efficiency, they'll save fuel, too.

For full facts on Honeywell Electronic Temperature Control, and how it can help meet *your* problems, call your local Honeywell office.

MINNEAPOLIS
Honeywell
Electronic Controls



112 OFFICES ACROSS THE NATION

...with
lightweight, versatile

Easy does it

Fast placing and erection . . . combined with
modern design and strength . . . make Laclede
Steel Joists the answer to today's needs
in roof construction.

LACLEDE STEEL JOISTS

*Kroger supermarket in Glendale, Missouri.
Architect, Cay Weinle, St. Louis.
Contractor, White Development Corporation,
St. Louis.*



LACLEDE STEEL COMPANY

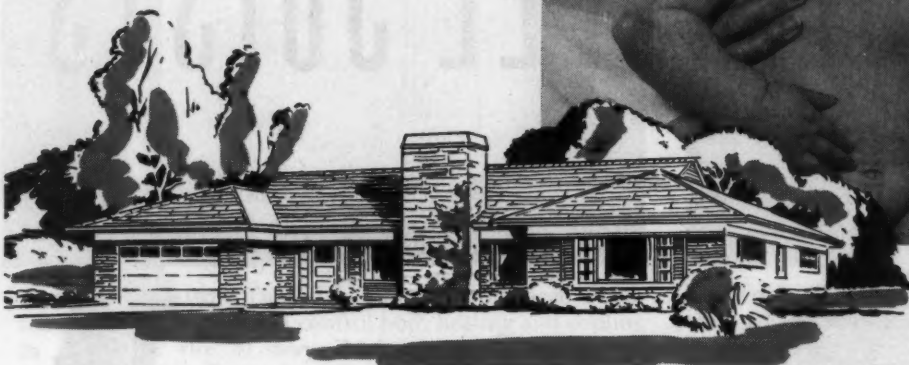
SAINT LOUIS, MISSOURI

Producers of Steel for Industry and Construction

HOT WATER HEAT

Sells the Home!

Home seekers know the importance of good heating in the house they plan to build or buy. They want modern radiant heat, too. Provide Thrush Radiant Hot Water Heat, the mildest, most uniform and most economical heating available today and the heating plant will sell the home.

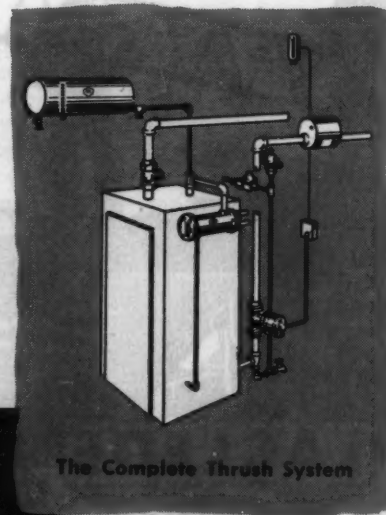


THRUSH RADIANT HEAT

for small budget homes

THRUSH Radiant Hot Water Heat is now within the budget of the medium or low cost home. New, compact, inexpensive equipment is adapted to the smaller heating requirements. It's sized to the job. Your clients will appreciate Thrush Radiant Hot Water Heat because it is quiet and clean. There are no drafts, no noisy fans, no dust blowing through the house. It operates at surprisingly low cost and is completely automatic, compensating for outdoor weather changes to maintain room temperatures within a fraction of one degree throughout the heating season.

For more information, see our catalog in Sweet's or write Department J-1.



The Complete Thrush System

H. A. THRUSH & COMPANY
PERU, INDIANA

Bonus Built!

ROOMIER . . .
STRONGER . . . LIGHTER

MEDART New Design * TELESCOPIC GYM SEATS



Medart sets the highest standard for all telescoping seats. Let your own comparison prove their superior value.

A NEW CATALOG tells all
...write for YOUR COPY



10 1/2" row rise for better seeing

2 ROW DEPTHS

22" rows for maximum seating in minimum space; 24" rows for extra room, extra comfort.

"DUAL ALIGN"

Cushioned roller bearings, keyed together and interlocked, give straight-line bearing. Wheels retract under load; let vertical uprights bear directly on floor.

"FLOATING MOTION"

Easy opening and closing achieved with interlocking members and multiple supports that give true, significant, smooth motion.



STRONGER SUPERSTRUCTURE

Fully self-supporting, more rugged than ever, steel parts give additional strength. 4 vertical uprights support each row—give controlled distribution of load over entire floor area.

LIGHTER

Weight has been reduced up to 70 pounds per row—the easiest of all gym seats to open and close.



*Medart Telescopic Gym Seats are fully protected by U.S. Patents.

FRED MEDART PRODUCTS, INC. • 3535 DE KALB • ST. LOUIS 18, MO.





*For the offices
you need in the
space you have*

***J-M Class A Asbestos Walls are movable . . . save space and make space
. . . are noncombustible, lower priced . . . come in pleasing colors***

New Johns-Manville Class A Movable Walls offer you advantages never before combined in an asbestos movable wall. They are modestly priced. They are noncombustible. They have a textured, stipple finish in restful colors. They reduce maintenance and relocation costs to a new low.

The finish of Class A Movable Walls is a tough, hard film many times thicker than on the usual movable partition. It is mar and scratch resistant . . . rejects stain and soil . . . can be easily washed and even scrubbed, if necessary. If damaged, it can be touched up inexpensively to look like new . . . and, unlike other types of factory-

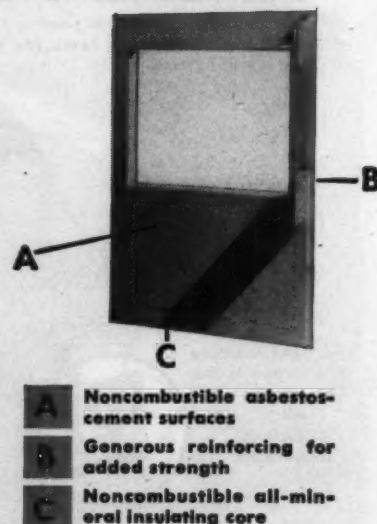
finished partitions, can be repainted with ordinary paint.

Undivided responsibility for a complete job

These flush or glazed partitions are erected by the Johns-Manville Construction Department complete with doors, door hardware, glass and trim.

. . . .

For details about J-M Class A Asbestos Walls, consult your Sweet's Architectural File, or write Johns-Manville, Box 158, Department AR, New York 16, New York. In Canada, write 565 Lakeshore Road East, Port Credit, Ontario.



Johns-Manville

for Rust-Free Hot Water



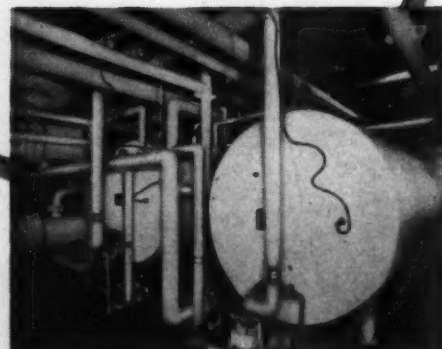
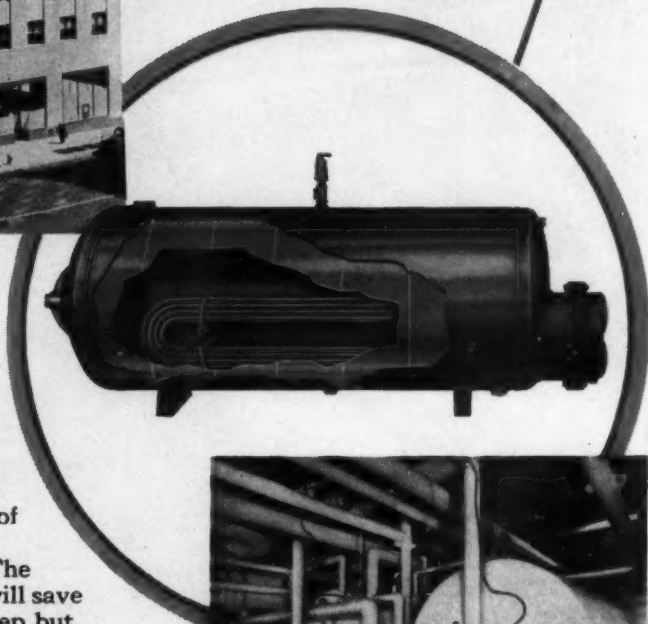
look for the
Copper Lining

they did at
DUN and BRADSTREET

Copper-lined water heaters manufactured by **p-k** are a sound investment, especially for big, modern buildings such as the Dun and Bradstreet building. In their new office building at 99 Church Street in New York City, these copper-lined storage heaters supply 180 deg. F. water for the cafeteria and 130 deg. F. for general use. An abundant supply of rust-free hot water is constantly available at the turn of a spigot. The flawless operation of the heaters will save money—not only in heater upkeep but also in the proper maintenance of building services.

The **p-k** copper-lined heater is a complete copper heater built inside of a heavy steel shell. It combines non-corrosive properties of copper with the superior strength of steel.

For an unfailing source of pure, rust-free hot water—



LOOK FOR THE **p-k** *Copper Lining*

Comprehensive catalog gives you all the facts. It's yours for the asking.



the **Patterson-Kelley Co., inc.**

1910 Burson Street, East Stroudsburg, Penn.

101 Park Avenue, New York 17 • Railway Exchange Building, Chicago 4 • 1700 Walnut Street, Philadelphia 3 • 96-A Huntington Avenue, Boston 16 • and other principal cities.

Core and coil construction is carefully designed for minimum power loss; close control of noise and heating. Quality insulation throughout—protects against failure, assures longer life.

All components, like this G-E Pyranol† capacitor, are manufactured to our precise specifications.

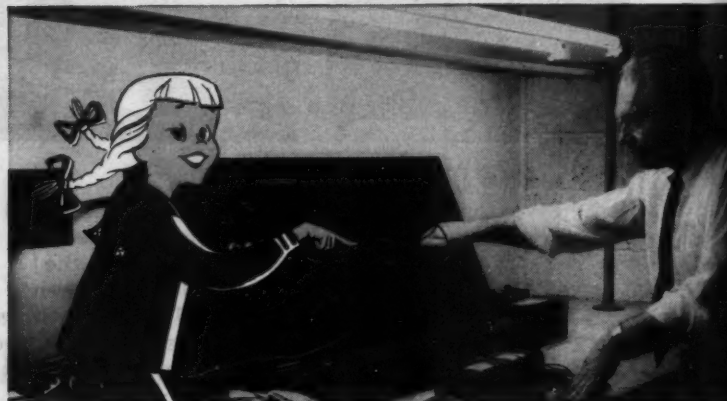
†Reg. trade mark of General Electric Co.

Every part of a G-E ballast is carefully designed, manufactured, tested and assembled to give you the best ballast value.

Flora* shows you General Electric

IF THIS IS YOUR APPLICATION ...	AND YOUR AVERAGE NOISE LEVEL IS HERE ...	WE RECOMMEND SOUND RATINGS
Broadcast Studio Church Country Residence	20-24 decibels	A B C
Evening School City Residence Quiet Office	25-30	B C D
Average Residence Public Library Study Hall		C D E
Classroom Professional Office	37-42 decibels	D E F
Noisy Residence Business Office	43-48 decibels	E F F
Store Noisy Office Factories	49 decibels and up	F F F

1. SOUND RATING—Only G-E ballasts are sound-rated to assure you of meeting your sound level requirements. You can choose the proper G-E ballast whether it's for a quiet installation or for an application where noise is less important. G-E sound rating eliminates expensive noise complaints.



4. LAMP-MATCHED DESIGN—The ballast governs light output and life of the fluorescent lamp. G-E ballasts are lamp-matched to provide up to 50% longer lamp life and up to 30% more light output. Here you save two ways—lower lamp replacement costs and more light from your installation.

Whether you use, install, specify or make fluorescent fixtures, G-E ballasts mean savings to you!

The six reasons why you save, described by Flora above, grow out of these simple facts:

- G-E ballasts are designed to high engineering standards (1, 3, 4, 5 above).
- G-E ballasts are made under exacting quality control standards (2 above).
- G-E ballasts are backed by complete sales and engineering services (6 above).

Only G.E. offers you all these money saving features.

In every conceivable way, we make sure you get more when you use G-E ballasts. For example, G-E engineering standards

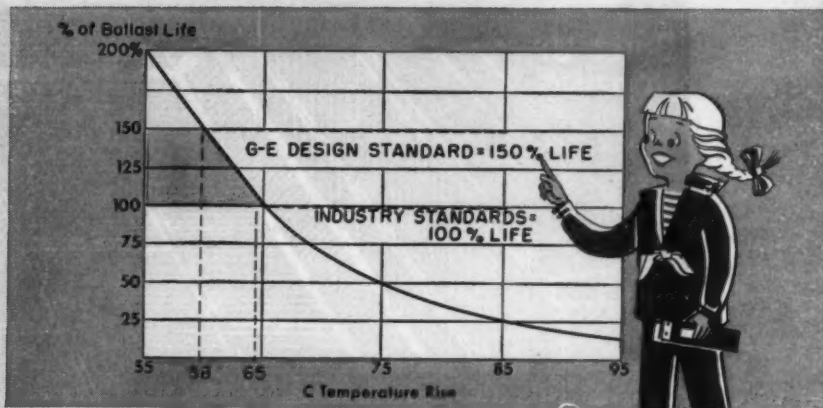
Copyright 1954, General Electric Company.

six ways . . .

ballasts help you save lighting dollars



2. UNIFORMLY HIGH QUALITY—Lighting specifiers have learned to depend upon the consistently high quality of G-E ballasts. Rigid material specifications and constant production line tests mean uniformly good ballasts; save lighting dollars on early replacement and maintenance costs.



3. LONGER LIFE—G-E ballasts are designed to operate 10% cooler than U.L. and Certified Ballast Manufacturers' standards. Tests show that a 10% reduction in ballast temperature rise can mean up to 50% longer ballast life, giving you half again as much ballast life!



5. PROVED PRODUCT LEADERSHIP—General Electric has the largest group of specially trained ballast design and development engineers in the industry. They're constantly improving G-E ballasts, assuring you of all benefits of top quality when you "specify" General Electric.



6. COMPLETE CUSTOMER SERVICES—General Electric's extensive sales, warehousing, and engineering organization is anxious to serve you. These unequalled facilities can provide services for you which no other ballast manufacturer offers. These extra services mean real saving to you.

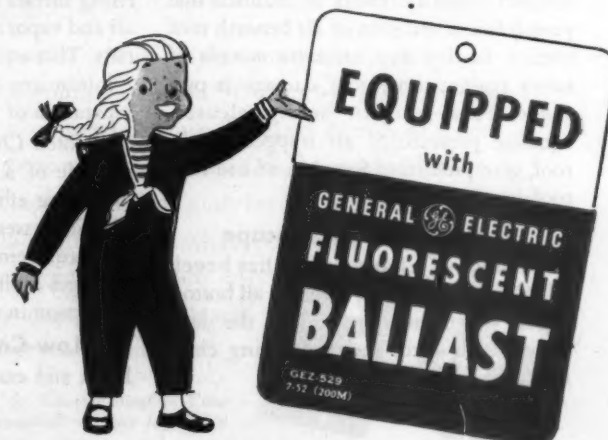
actually exceed the specifications established by the Certified Ballast Manufacturers where extra quality pays off to you. Another example: Ten quality control stations make dozens of physical and electrical checks during manufacture to assure that each ballast measures up to the high G-E standards.

Next time, specify General Electric Ballasts. Dollar for dollar they're your best ballast value.

LOOK FOR THIS G-E BALLAST TAG

A G-E ballast tag on your fixture is proof that it's equipped with a top-quality ballast. It's the easy way to be certain. For further information on G-E ballasts, contact your nearest G-E Apparatus Sales Office or G-E Distributor. General Electric Company, Schenectady 5, New York.

*Miss Flora Ballast, G-E Ballast Mascot.

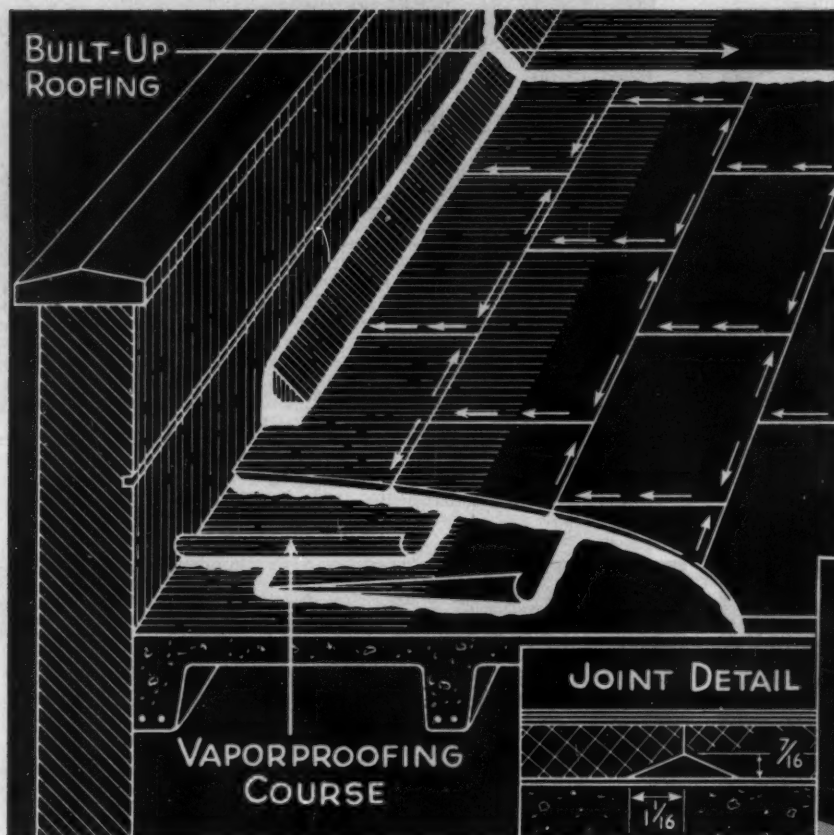


Progress Is Our Most Important Product

GENERAL  ELECTRIC

EXCLUSIVE NEW CHANNELING

has no equal in guarding against



1. Blistering
2. Separation of felt and insulation

This shows how Celotex Channel-Seal Roof Insulation prevents build-up of high-pressure air pockets. Pressures due to temperature differences are constantly being equalized by movement of air through the channels. This channeling principle of roof protection has been proved effective by years of use on jobs of every type and size.

Celotex Channel-Seal Roof Insulation gives Positive Protection!

Installed, Celotex Channel-Seal Roof Insulation forms a network of channels that permit free circulation of air beneath roof surface. In this way, an *extra margin* of safety against costly roof damage is provided. These built-in "safety releases" equalize pressure of air trapped in the roof, give protection found in no ordinary roof insulation!

Trapped Air Finds Escape

Each piece of Channel-Seal has bevels 7/16" high by 1-1/16" wide on all bottom edges. When units are laid on the deck, these bevels form interconnecting channels across the entire roof.

High pressure areas, building up from rising surface temperatures, are relieved by air and vapor movement through the channels. This equalizes and reduces pressure—minimizes the danger of blistering, or separation of felt from insulation!

Celotex Channel-Seal Roof Insulation is made of a low density board of high insulating efficiency. It comes in a range of thicknesses to meet the specific insulation requirements of each job. Both sides, all edges asphalt coated for extra moisture protection in storage and on the job.

Low-Cost, Quickly Applied

Light and easy to handle, yet remarkably

rigid and tough, Channel-Seal is low in both initial and applied cost. Resists damage from job handling. Quick, easy to apply. Smooth surface assures positive bond to both roof deck and roofing felt.

Insist on genuine Celotex Channel-Seal... the only roof insulation made of tougher, stronger, long Louisiana cane fibers—and protected by the patented Ferox® Process from dry rot and termite attack. Write now for full data on Channel-Seal and other types of job-proved Celotex Roof Insulation.

Just address The Celotex Corporation, Dept. AR-15, 120 S. La Salle St., Chicago.



For a better roof...specify genuine

THE CELOTEX CORPORATION
120 SOUTH LA SALLE STREET • CHICAGO 3, ILLINOIS

CELOTEX
REG. U. S. PAT. OFF.
ROOF INSULATION



Here are views of the recently completed King's Daughters Hospital, Shelbyville, Kentucky. Architects: Nevin & Morgan, Louisville, Kentucky. Pharmacy illustrated above.



Above: Laboratory; Below: Nurse's Station.



NEW KING'S DAUGHTERS HOSPITAL



selects *St. Charles* STEEL CASEWORK

Another impressive name is added to the long list of hospitals that are experiencing the many benefits of St. Charles casework. Architects have found that St. Charles long years of experience, competent personnel, and the nation's newest, most modern casework fabricating plant offer complete assurance of satisfying their specifications, from blueprint to reality.

St. Charles methods of custom-building and color styling place no limit on creative imagina-

tion, when you design and specify hospital casework.

To assist you in planning maximum efficiency into hospital casework, St. Charles offers a wide range of special units designed specifically for this demanding field. St. Charles also maintains a complete design and layout service, freely available to you in whatever degree you wish. Upon receipt of your enquiry, complete details will be sent you promptly.

A newly published, 40-page catalog, "St. Charles Hospital Casework," will be mailed to you when requested on your letterhead.



St. Charles

casework sinks and counters special purpose units

ST. CHARLES MANUFACTURING COMPANY, DEPT. AR, ST. CHARLES, ILLINOIS

Do you realize the savings copper drainage



FAST, EASY-TO-MAKE JOINTS. Solder-type fittings save hours. No threading, no pouring and caulking.

LIGHTWEIGHT PERMITS PRE-ASSEMBLY. ANACONDA Type M Copper Tubes permit more pre-assembly work at the shop. Even large units can be handled easily. A copper tube and fittings installation weighs about $\frac{1}{4}$ as much as ferrous materials.

EASY TO HANDLE. In 3" diameter, a 20' length of ANACONDA Type M Copper Tube weighs only 54 lb. Lightweight makes them easy to handle, assemble and hang. Contractors can rough in faster with copper tube and soldered fittings than with heavy pipe and threaded or caulked connections.

LONG LENGTHS ELIMINATE MANY JOINTS. ANACONDA Type M Copper Tubes come in standard 20' lengths. This saves contractors' time and fittings when long runs are required.



ge systems can provide?

If you have never specified a drainage system in copper, we suggest you try it soon, if code permits. Then ask the contractor to compare time and costs.

Shop fabrication of stack, waste and vent sections... ease of making solder connections... use of standard 20'-lengths for long runs... elimination of wide plumbing walls or "build-outs"—all add up to savings.

Many builders know what many plumbing contractors have proved: that soil, waste and vent lines of ANACONDA Copper Tubes and Fittings can cost *less*. Here are just 3 examples. (Names and addresses furnished on request.)

● **CASE A.** Plumbing Contractor "A" bid an "all-copper" job for a housing development—water and drainage lines. His bid was 10% lower than other bids based on copper for water pipe only.

● **CASE B.** Contractor "B" was awarded a job on a small-size house. Before he started, the owner changed the specification to copper. When the job was completed, he figured he had saved \$19.01 over a comparable installation of ferrous pipe.

● **CASE C.** Contractor "C's" figures show that on his first copper drainage system he cut installation time $\frac{1}{4}$, compared with similar size jobs using heavy wrought or cast piping.

In addition to installation savings, the use of nationally known ANACONDA Copper Tubes and Fittings adds to the salability of new homes. Home buyers know and respect copper's quality and freedom from maintenance.

Send for your free copy of "Copper Tube Drainage Systems." This booklet gives all the information you need on tubes, fittings and their installation. Fill in and mail coupon below.

5412A

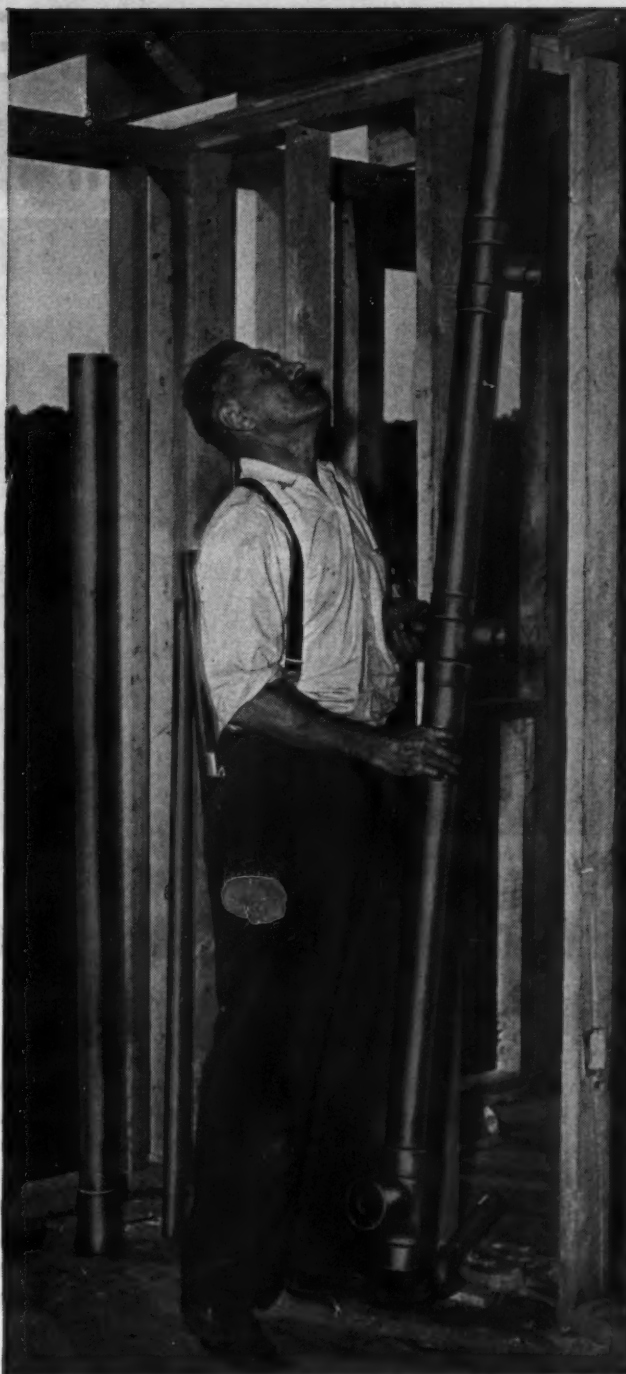
Advantages of copper tubes and cast bronze solder type drainage fittings for soil, waste and vent lines

- big savings in installation time and costs
- economies effected by pre-assembly work done in the shop or on the jobsite
- carpentry savings
- mark of quality construction

ANACONDA

COPPER TUBES

Available through plumbing wholesalers



SAVES CARPENTRY AND SPACE. A 3" copper tube stack with fittings fits inside a 4" partition. Trim copper tube and compact fittings give greater freedom of placement... reduce cutting of studs and joists. No need to plan for wide plumbing walls or build-outs.

FREE BOOKLET!

The American Brass Company,
Waterbury 20, Conn.

(In Canada: Anaconda American Brass Ltd.,
New Toronto, Ont.)

Please send me free booklet, "Copper Tube Drainage Systems," which shows how to cut costs with copper.

NAME _____ (PLEASE PRINT)

COMPANY _____

STREET _____

CITY _____ ZONE _____ STATE _____

DOORS IN THIS MODERN HIGH SCHOOL SWING ON GETTY'S NEW NYLON BEARING HINGES



Architects: Wurster, Bernardi & Emons
San Francisco, California

Builder: The Pacific Company
Berkeley, California

Hardware Contractor: Marshall-Newell Supply Co.
H. W. Sites, A.H.C., San Francisco, California

New School in Antioch, Calif., Saves on Hinge Maintenance and Replacement Costs with 462 Pairs of Getty Nylon Bearing Butts

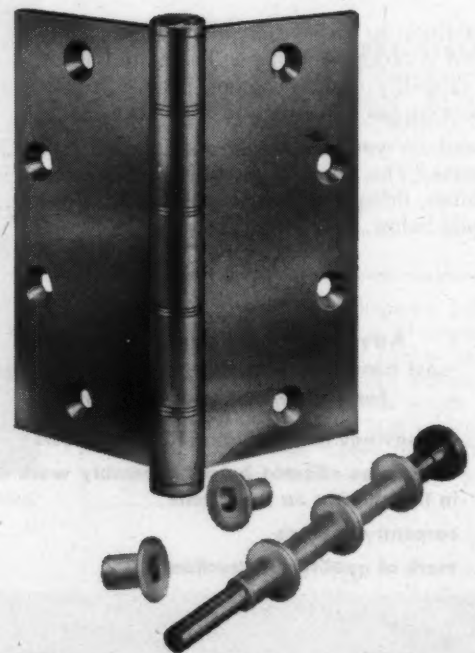
As you can see from the architects' drawing, the new high school in Antioch is one of the most beautifully designed and best equipped in the country. Longer hinge life and lower maintenance costs were written right into the plans when Getty Nylon Bearing Butts were specified for the majority of the doors.

Getty Nylon Bearing Hinges represent one of the most important improvements in hinge design in over 50 years. They swing smoothly and freely. They last for years, never need lubrication, and are moderately priced.

The Getty Nylon Bearing Hinge is made completely of extruded bronze except for the pin, which is stainless steel. The interior of the barrel is bushed in nylon, with the flanges acting as bearings.

These nylon bearings wear far longer than metal—never rust or corrode—are unaffected by weather. They save on upkeep because they never need lubrication. And they will not bind or squeak, even on little-used doors.

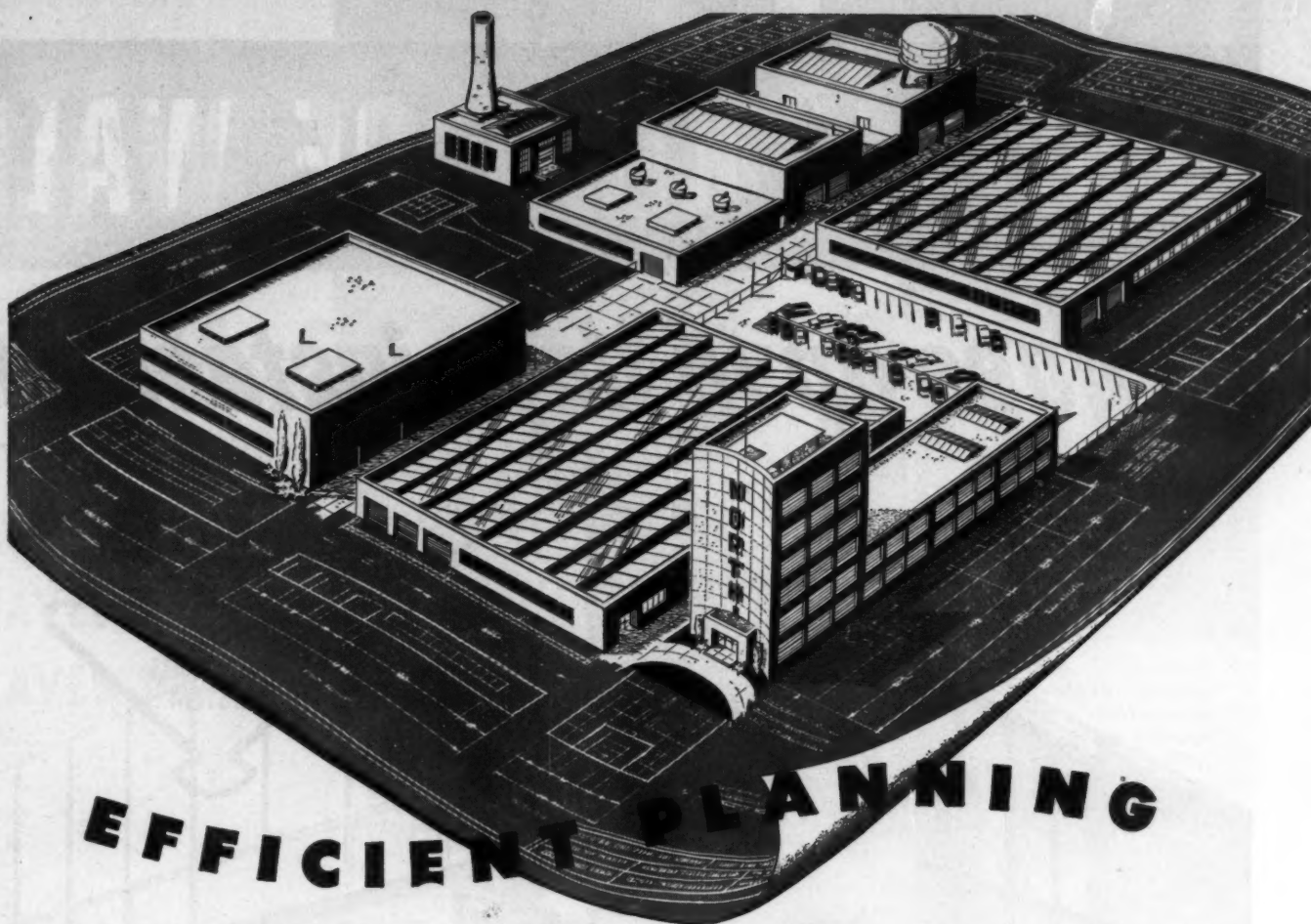
Getty Nylon Bearing Hinges are unquestionably the finest and most practical hinges you can recommend today—precision built for commercial, industrial, institutional or home installation. You'll want the whole story. For complete details, including specification data, write H. S. Getty & Co. now.



H. S.

& CO., INC., 3348 NORTH 10TH STREET, PHILADELPHIA 40, PA.

Canadian Representative: A. N. Ormsby Co., 23 Scott St., Toronto



EFFICIENT PLANNING

Starts with **RICWIL**

● Early planning with a RIC-WIL field representative on central heating or air conditioning systems will mean less work later on. Custom engineering and pre-fabrication of RIC-WIL units offer quick, efficient installation. RIC-WIL's engineering service with forty-five years experience in the Insulated Piping Field is available for early planning and consultation.

Write or phone your nearest representative or send for the illustrated RIC-WIL catalog.



*Quality Piping Systems of the . . .
... Highest Thermal Efficiency*

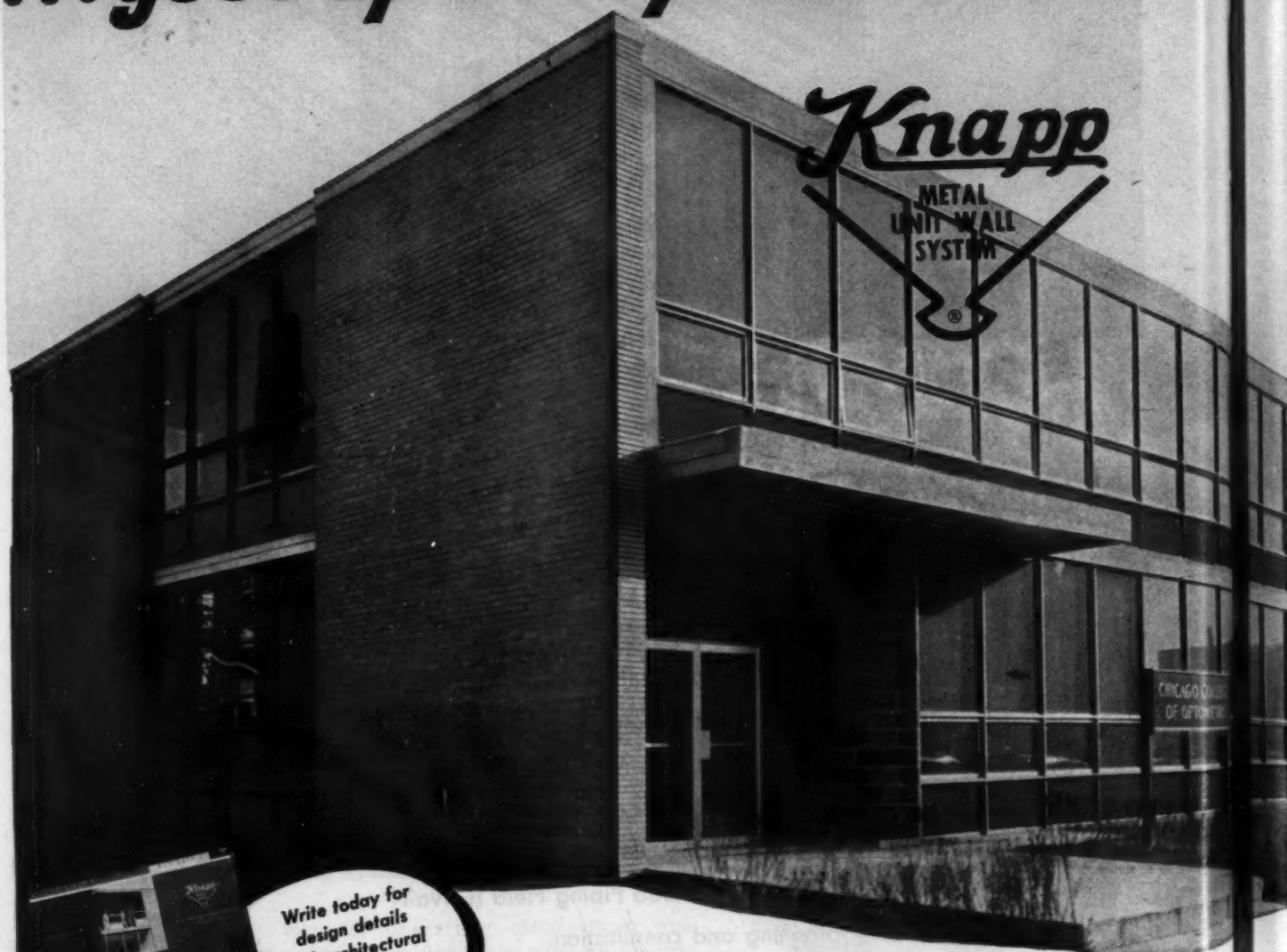


PREFABRICATED INSULATED PIPING SYSTEMS

BARBERTON, OHIO

***NEW* KIND OF WALL**

...goes up in days instead of



Write today for
design details
and architectural
specifications.

**Knapp Bros. Mfg. Co., Dept. AR-155
16 E. 72nd St.
Cincinnati 16, Ohio**

**Please send me complete information on
Knapp Unit Wall System.**

Name.....
Company.....Title.....
Address.....
City.....Zone.....State.....

Knapp brings to the building industry the first *completely flexible* modular grid wall system . . . a new and practical approach to panel wall construction. These factory assembled units go up quickly and at substantial savings over conventional wall construction.

Included in this revolutionary system are ventilators for fenestration if required, insulated panels and all other accessories that make up a finished wall system. It can be adapted to all types of single and multi-story buildings, and is available in *steel* or *extruded aluminum*.

Knapp engineers are on call to study your requirements and suggest how the Knapp Modular Grid Wall System will fit into your building.

SYSTEM

months!

**SAVES TIME
SAVES LABOR
SAVES MONEY**



FLEXIBILITY OF DESIGN. Knapp Unit Wall Panels are assembled at the factory with the exception of glass. Each unit is complete with insulated metal panels and ventilator completely caulked. They provide full flexibility of design. Ventilators, fixed glass and insulated panels can be varied to meet the individual requirements of the job.

LIGHTWEIGHT. Knapp Metal Wall Panels are lightweight compared with masonry construction. This feature effects substantial savings in structural framing and footings. Reduced wall thickness adds substantial amount of floor space in multi-story buildings.



ATTRACTIVE APPEARANCE. The insulated panels are available in a variety of materials including aluminum, stainless steel and porcelain enamel in a wide range of *non-fading colors*. The neat, trim, streamlined appearance of the Knapp Wall System enhances the functional beauty of modern institutional, commercial and industrial buildings.

COMPLETE FACADE CONSTRUCTION. Because it is difficult to segregate door framing from exterior facade, the Knapp Wall System is designed to include framing to fit all door openings specified by the architect. *Here is the system you can specify to include the complete facade to be furnished by a single manufacturer.*

KNAPP BROS. MFG. COMPANY, 16 E. 72nd St., Cincinnati 16, Ohio

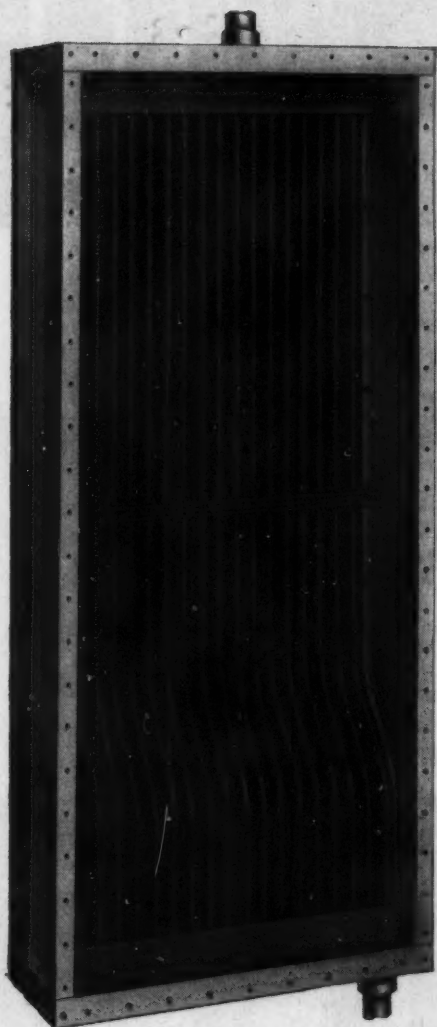
SPEEDS ERECTION. Knapp Unit Wall System is engineered and designed for simple, fast installation. Adjacent units are connected by specially designed sections and hook bolts. Panels are firmly secured to the structural framing with a minimum of time and effort. No construction delays . . . erection can proceed in all kinds of weather. Knapp Wall Panels go up in days instead of months, assuring earlier occupancy of the building.



EFFICIENT

Extended-Surface

HEAT EXCHANGERS



Aerofin is sold only by manufacturers of fan-system apparatus. List on request.

for

Heating

Cooling

Process

Air Conditioning

**ASK THE
AEROFIN MAN**

Your Aerofin man's recommendation means high efficiency, long service life, low maintenance costs.

Aerofin's unequalled laboratory and manufacturing facilities — unequalled knowledge of heat-exchange practice — are devoted exclusively to the design and manufacture of highest quality extended heat surface.

AEROFIN CORPORATION
101 Greenway Ave., Syracuse 1, N. Y.

*Right off your Square D
Distributor's shelf!*

New QMB Saflex Distribution Panelboard



• **Exactly the Power Panelboard you want**—when you want it. Your Square D Distributor stocks boxes, interiors and plug-in units which can be quickly assembled to meet virtually any specifications. Above, interior ready for easy mounting in box.



• **Plug-in Units** are installed easily on tubular bus bars. The solid neutral can be changed in minutes. Here is flexibility that reduces "down time" and saves money.



• **Three Simple Assembly Steps**
Fronts, with adjustable trim clamps, are available with or without doors.

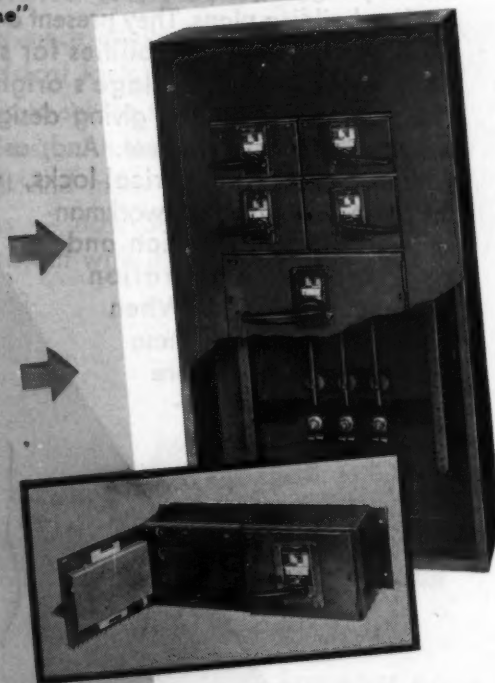
With ALL these Quality Features

INTERIORS are flexible and adaptable to almost any service and voltage. Plug-in units and solid neutral can be changed simply and quickly.

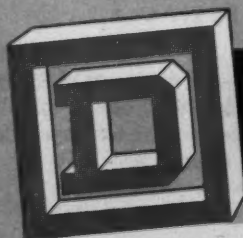
BOXES provide generous wiring space.
FRONTS furnished with or without doors have adjustable trim clamps.

UNITS have quick-make, quick-break switch mechanism, visible blades and are horsepower rated. 30, 60, 100 and 200 ampere units are plug-in, while 400 and 600 ampere units are bolted to the bus.

• Underwriters' Approved for Service Entrance



ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS



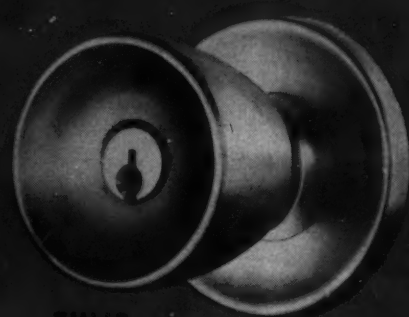
SQUARE D COMPANY

5 new designs

by

SCHLAGE®

Again Schlage leads the way with functional new lock stylings especially created to fit your modern building plans. They present a variety of refreshing new possibilities for smart door decor — with Schlage's original "long-backset" principle giving design freedom in lock placement. And, as with all Schlage cylindrical locks, they offer a quality of workmanship, ease of installation and convenience of operation that's unsurpassed. When you specify and install these new designs, you insure door appeal and reflect building quality.



TULIP

An unusually handsome concave-faced design with a fullness of gripping surface that is pleasant to the hand. Available for both residential and commercial buildings.



REGENT



IMPERIAL

Auxiliary escutcheons shown on left with Plymouth lock design, on right with Tulip. A striking concave square background to enhance the beauty of Schlage locks. The Imperial design installed on the entrance door, can be tastefully repeated by the Regent for interior doors. Both can be placed in the diagonal for a distinctive diamond effect. Regent, 3 1/2" x 3 1/2". Imperial, 5 1/2" x 5 1/2".

ALL DESIGNS SHOWN ARE CURRENTLY AVAILABLE.



STAR

An effective way to give stunning decorative emphasis to both residential and commercial doors, size 10 1/2" x 6 1/2". Also available in a smaller size, Asted design, 7" x 6 1/2".



SATURN

Beautiful combination design with Saturn lock design. A beautiful disc design—adds a total dimension to both door entrances. Recommended for commercial and residential installation. 6" diameter.

Modern Lock Design Starts With Schlage

Ever since Walter Schlage invented the cylindrical lock, Schlage products have continued to set the standard for modern lock making. First with the push-button lock, the long backset and many original architecturally-styled designs — now Schlage adds five new designs — consistent with its position as leader in modern lock making.

SCHLAGE®

"Pacesetter in Modern Lock Design"

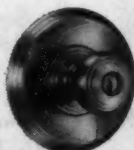
SCHLAGE LOCK COMPANY • SAN FRANCISCO • NEW YORK • VANCOUVER, B.C.
Address all correspondence to Schlage Lock Company, San Francisco



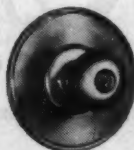
MERCURY



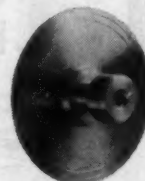
PANTHEON



NOVO/RIVIERA



PLYMOUTH/DARIEN

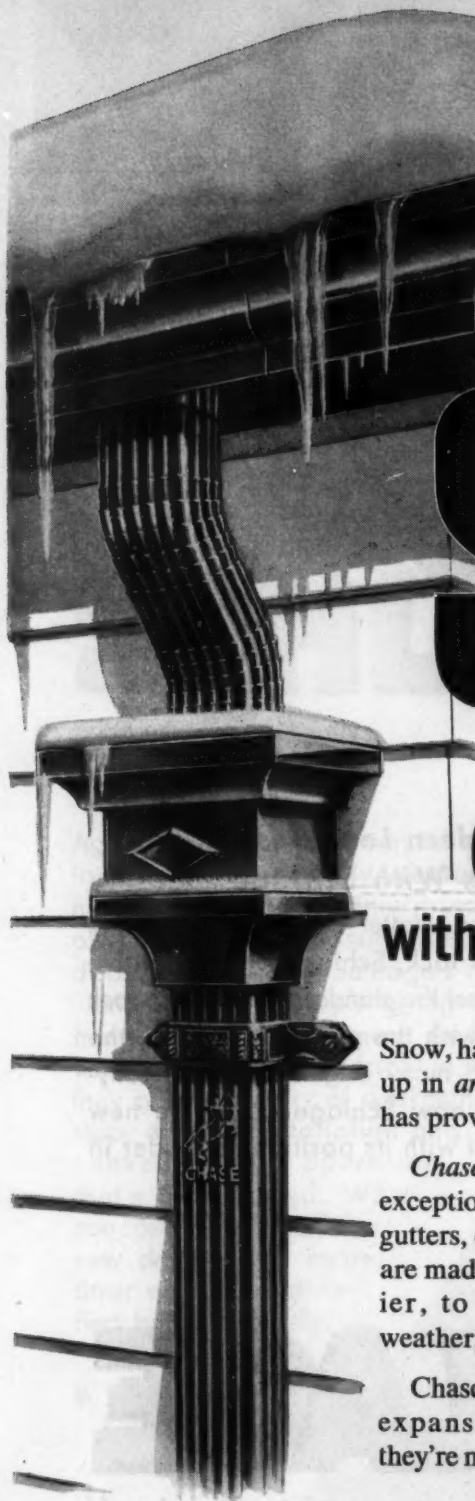


ZENITH/NOVO



MONARCH

6 famous current designs that exemplify Schlage leadership



EXTRA STRONG

CHASE[®] copper roofing products
withstand the weight of snow and ice!

Snow, hail, rain or sleet—copper stands up in *any* weather. It can never rust, has proved its durability for *centuries*.

Chase Copper Roofing Products are exceptionally durable. Chase copper gutters, downspouts, elbows and shoes are made of 16 ounce copper or heavier, to withstand the ravages of weather, the weight of snow and ice.

Chase copper leaders have strong, expansion-proof seams—because they're made from generous, full-width

copper strips. Corrugations are deep and ample, allow for extreme temperature changes.

Chase Copper Roofing Products can be handled easily, and can be joined by using standard soldering techniques.

Choose Chase Copper Roofing Products, and you're sure of a quality job—one that will last for years. Find out more about Chase Copper Roofing Products by sending for the free Chase Copper Roofing Products Booklet.

Chase 
BRASS & COPPER CO.

WATERBURY 20, CONNECTICUT • SUBSIDIARY OF KENNECOTT COPPER CORPORATION

Chase Copper
adds extra value
to any home!

The Nation's Headquarters for Brass & Copper (takes office only)

Albany†	Chicago	Denver	Indianapolis	Minneapolis	Philadelphia	St. Louis
Atlanta	Cincinnati	Detroit	Kansas City, Mo.	Newark	Pittsburgh	San Francisco
Baltimore	Cleveland	Grand Rapids†	Los Angeles	New Orleans	Providence	Seattle
Boston	Dallas	Houston	Milwaukee	New York	Rochester†	Waterbury

It's Brand New



National Electric Superduct

**Super Protection Against
Toughest Corrosive Conditions**

Independent Tests* Conducted by Pittsburgh Testing Laboratory Show NE's New Superduct —

- Reduces Maintenance to a Minimum
- Eliminates Conduit Repairs
- Prevents Production Downtime for Corroded Conduit Replacements

*WRITE TODAY

Get the complete facts about Superduct Rigid Conduit including actual test reports of Pittsburgh Testing Laboratory's Sulfuric Acid, Salt Spray, Caustic and Heat Tests.

Be prepared for the next conduit installation where heavy-duty corrosion protection is essential.

Listed by Underwriters' Laboratories, Inc.

WHAT IT IS

Superduct is National Electric's new heavy-duty rigid steel conduit. It has all the corrosion protection provided by the Sherardizing process of galvanizing plus a special baked-on resin synthetic base coating. The result: NE Superduct is ideally suited for installations wherever wide temperature ranges or excessive corrosion from acids, caustics or moisture is just too rough for even the best regular conduit.

WHAT IT PROVIDES

Heavy-Duty Corrosion Protection

SUPERDUCT

Resists corrosive action of almost all chemicals, oils, greases, moisture and weathering conditions.

Does not corrode or rust when buried in the ground.

Resistance to Temperature Change

SUPERDUCT

Unaffected by extremes of ambient temperatures.

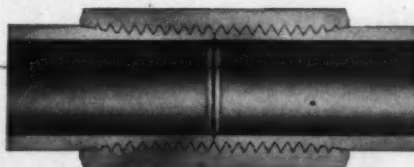
Stands up under conditions of high temperatures and high humidity.

Smooth Working and Fishing

SUPERDUCT

Has all the easier working, forming and bending properties resulting from the Sherardizing process of galvanizing.

Like Sherarduct, SUPERDUCT couplings are designed to allow the conduit ends to butt within the coupling . . . permits solidly locked, easily fished, thoroughly grounded system.



Complete Thread Protection

Every hill and valley of Superduct threads and couplings has full protection of both zinc and special vinyl resin enamel.

EVERYTHING IN WIRING POINTS TO

National Electric Products

PITTSBURGH, PA.

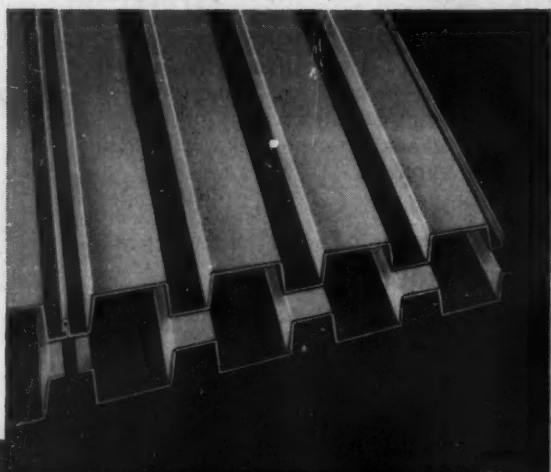
3 Plants • 8 Warehouses • 34 Sales Offices



MILCOR

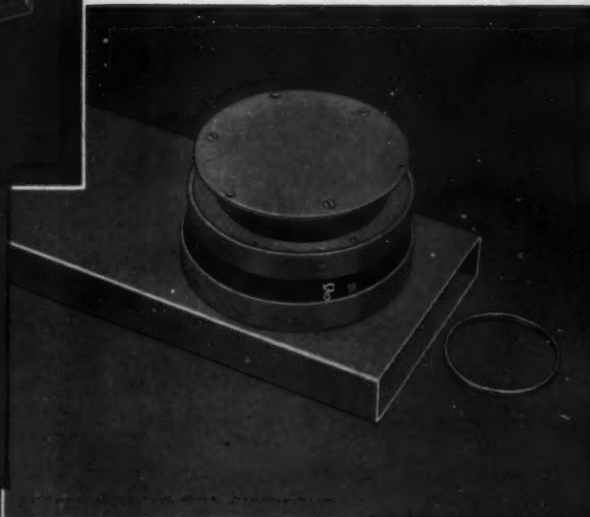
walker
of Conshohocken

Two leaders in the b



Now! A STRUCTURAL SUB-FLOOR OF INLAND T-10 GALVANIZED STEEL PANELS, retaining the strength of steel-wall coating. The panels consist of base-beam sections in five basic types to meet all job requirements.

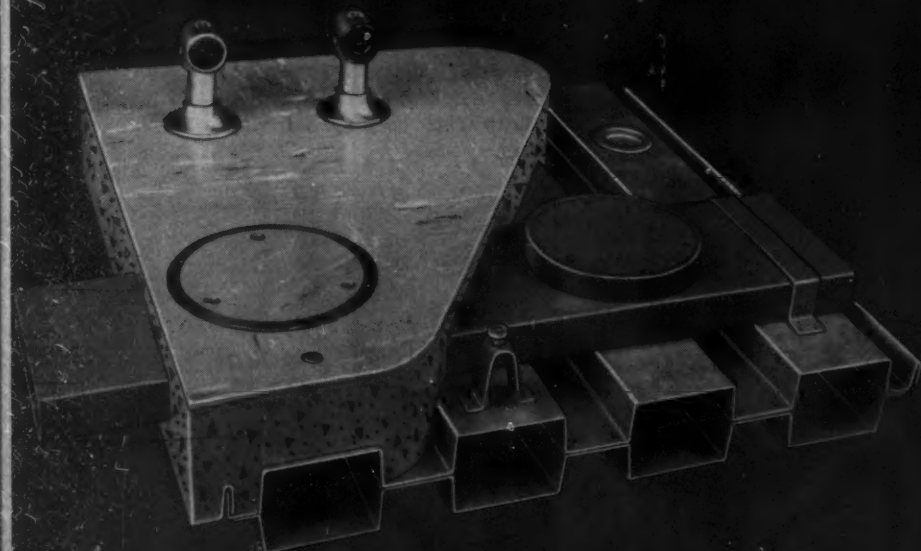
Now! A ONE-PIECE SLEEVE IS QUICKLY EXPANDED INTO CELL. Walker Service Fittings are easiest to install. Outlets lock in place — cannot work loose to cause service failures. A wide variety of types are available to meet today's building requirements.



Now! UNIQUE ACCESS UNIT PROVIDES 15" HEIGHT ADJUSTMENT. Tops may be quickly raised, lowered, or leveled by means of three exposed screws — even after concrete has set! Suitable covers are available for all types of floor covering materials. Capacity up to 25% larger.

Now! THE CELLULAR CONSTRUCTION OF MILCOR CELLULOR COMBINES WITH WALKER HEADS DUCTS to provide in-floor runways for electrical wiring. Cells are spaced six inches apart, to permit positioning of outlets at any location.

Two-and-one-half inches of concrete fill is placed over Milcor Cellulor and contributes to its fire-resistant rating.



e building industry jointly announce

MILCOR* **CELLUFLOR**

with **WALKER** **ELECTRIFICATION**

— the floor of the future that permits unlimited flexibility in electrification and greater speed in construction.

Here is a major development by two companies with the combined experience of more than a century of leadership in the building field. It's the new Milcor Celluflor with Walker Electrification!

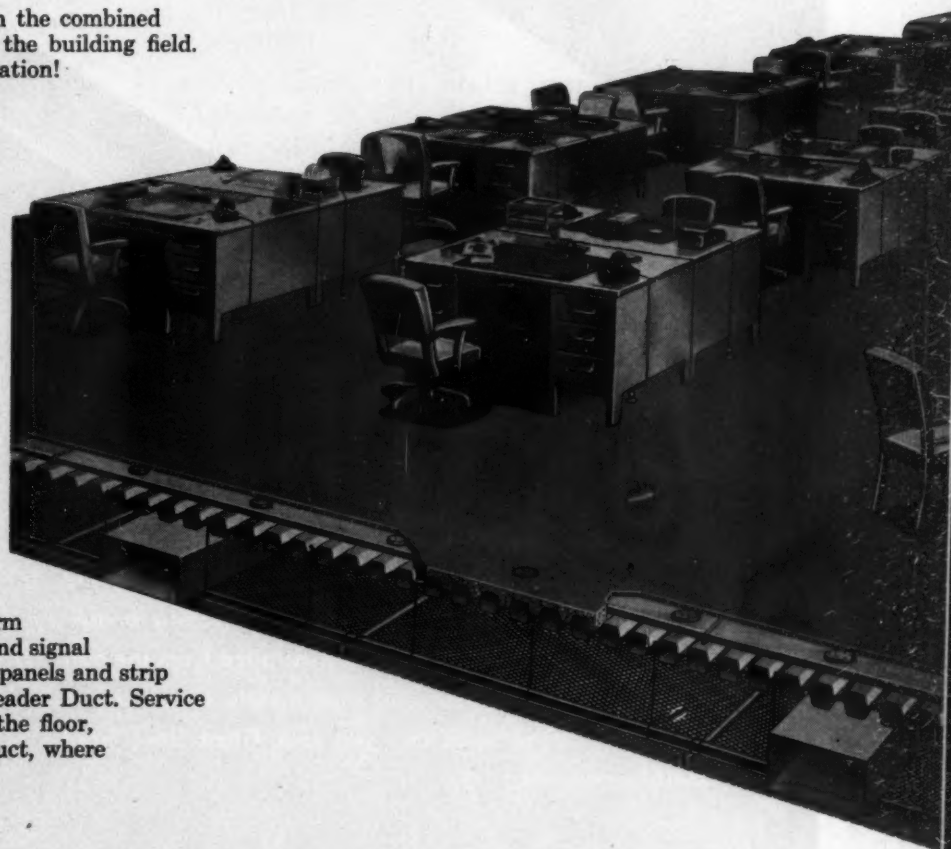
With this new product, any electrical distribution system you plan today is just as efficient tomorrow, when circuit requirements change.

An owner or tenant can add as many desks, telephones, or business machines as he likes — he can revamp his entire floor plan — it makes little difference, if you've originally specified Milcor Celluflor with Walker Electrification. Electrical outlets can be relocated and new ones added quickly — without the cost of extensive alterations.

THIS IS HOW IT WORKS:

Milcor Celluflor panels are quickly placed on structural steel members to provide a safe working floor and storage space for all trades during construction. The floor is light in weight and reduces the cost of foundations and structural steel. Celluflor eliminates wood forms, safety staging, or temporary shoring, and therefore speeds and simplifies construction. The hidden cells form ideal raceways for carrying wires for telephone, light, and signal services. Wires are brought into the cells from power panels and strip cabinets by means of new Walker larger capacity Header Duct. Service outlets can be installed at practically any point on the floor, the wires brought through the cells to the Header Duct, where concealed access units facilitate connection.

Write for latest bulletins.



*Reg. U. S. Pat. Off.

INLAND STEEL PRODUCTS COMPANY

4033 WEST BURNHAM STREET

MILWAUKEE 1, WISCONSIN



WALKER BROTHERS

FACTORY AND GENERAL OFFICES, CONSHOHOCKEN, PA.

New Pittco

NO. 17

Recessed Sash

... provides an inconspicuous flush setting for installations where you desire to preserve an unbroken plane between interior and exterior. It is self-adjusting to various glass thicknesses and is easily installed from the outside with the face piece and clips merely snapped into place. For complete details, see your Pittco Store Front Metal representative.



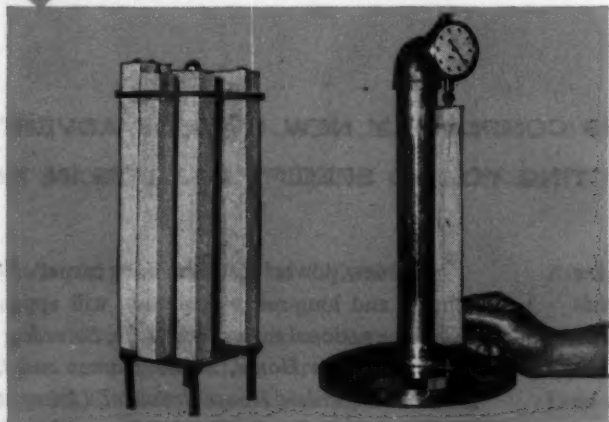
PAINTS · GLASS · CHEMICALS · BRUSHES · PLASTICS · FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

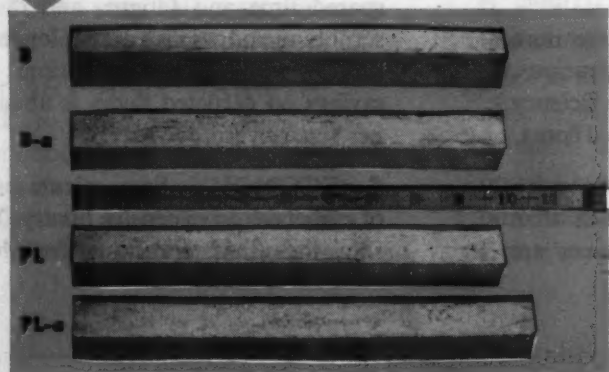


The autoclave test requires the use of a high pressure steam chest (above). Masonry cement bars approximately 1" x 1" x 10" are exposed to 295 lbs. steam pressure, 420° F., for 3 hours. Measurements of the bars are made before and after test as shown below.



Below: Bars of Brixment, and of portland cement and a lime which does not meet the autoclave test. The expansion of the portland cement and lime bar, after autoclaving, is quite evident.

- B—Brixment, not autoclaved.
- B-a—Brixment, autoclaved.
- PL—Cement and lime (1 to 1) not autoclaved.
- PL-a—Cement and lime (1 to 1) autoclaved.



BRIXMENT MEETS AUTOCLAVE TEST!

Sound mortar is essential for strong, durable brickwork. To be sound, mortar must be free of constituents which may cause abnormal expansion after long exposure to weather.

Unsoundness in mortar material is readily detected by the autoclave test. This severe test rapidly accelerates the chemical reaction of mortar materials, and the slightest unsoundness is immediately revealed by excessive expansion.

Brixment easily meets the autoclave test requirements of the Federal and ASTM specifications. It also complies with the strength requirements of both specifications, for Type II masonry cement. Therefore, when Brixment is used, sound mortar and strong, durable brickwork are assured.

LOUISVILLE CEMENT COMPANY
Louisville 2, Kentucky



ARTLOOM • BEATTIE • BIGELOW • DOWNS • FIRTH • GULISTAN •
LEEDOM • LEES • MAGEE • MASLAND • MOHAWK • NYE-WAIT •

ANNOUNCE A GREAT TO INCREASE YOUR CLIENTS' "HOME MEANS MORE WITH

WITH THIS COMPLETELY NEW KIND OF ADVERTISING
EXPECTING YOU TO SPECIFY CARPETS IN HOMES,

The unique beauty of carpet is already taken for granted by most of your clients. Now this great advertising campaign will emphasize the *basic need* for carpet, its utility and economy.

Home and building owners by the millions will be convinced, not only that they can afford carpet, but that they actually cannot afford to be without it.

These new, powerful ads, stressing carpet's functional benefits and long-range economy, will appear in the following national magazines: *Life*, *Saturday Evening Post*, *American Home*, *Better Homes and Gardens*, *House and Garden*, *House Beautiful*, *Living for Young Homemakers*, *Sunset*, *Bride's Magazine*, *Parents*, *McCall's*, *Woman's Home Companion*, *Ladies' Home*

HERE ARE THE 5 BASIC NEEDS FOR CARPET

1. QUIET—Carpets absorb up to 90% of floor noise. With carpet, homes are more restful, and living becomes more gracious. Carpeted offices increase work-efficiency over offices with noisy, hard surfaced floors.

2. EASY TO CLEAN—Upkeep on carpeted floors is considerably less than upkeep on hard floors. Housewives are

spared time and fatigue, and distasteful scrubbing and waxing are no longer necessary. In buildings and institutions, average savings on carpeted floors is about \$3.96 per square yard per year.

3. ECONOMY—Some clients may think of carpets as an expensive luxury. You can show them that good carpet costs less than

N • HARDWICK & MAGEE • HIGHTSTOWN • HOLMES • KARASTAN
T • PHILADELPHIA CARPET • ROXBURY • SANFORD • ALEXANDER SMITH

AT NEW ADVERTISING PROGRAM S' ACCEPTANCE OF CARPET

H CARPET ON THE FLOOR"

SING CAMPAIGN, MORE OF YOUR CLIENTS WILL BE
MES, OFFICES, STORES, AND PUBLIC BUILDINGS

ctional
in the
Evening
ardens,
Young
rents,
Home
Journal, *Woman's Day*—a total of 210,426,596
messages.

To carry conviction to its ultimate conclusion,
separate carpet campaigns will be directed toward
special groups in the following publications: *Busi-
ness Week, Institutions, Wall St. Journal, Architectural
Forum, Progressive Architecture, Architectural*

Record, American Builder, Interiors, Interior Design.

Survey after survey shows that decorators and archi-
tects have always preferred carpet above all other
types of floor covering. Now, by pointing out new
facts about its quiet comfort and long-range economy,
the carpet industry will make the client's preference
the same as yours.

PET THAT YOUR CLIENTS WILL BE READING ABOUT

asteful
neces-
verage
\$3.96
y think
ou can
ss than
they think. Carpet gives long years of eco-
nomical wear, costs far less to maintain.

4. COMFORT AND WARMTH —
Everyone feels more at ease on carpets
than on hard floors. Carpet is easier on the
feet, easier on the nerves. Hard-floor
fatigue, a common ailment, can be easily
remedied by soft comfortable carpet.

5. PRIDE OF OWNERSHIP — The
envied beauty of carpet adds a special
pride to every homeowner's heart. In busi-
ness, carpet is an outward sign of success.
Salesmen and customers are equally im-
pressed by carpeting for, despite its econ-
omy, there is something about carpet that
says, "success walks on carpeted floors."

CARPET INSTITUTE, INC., 350 Fifth Avenue, New York 1, N. Y.

Design with
*Engineered
 Timbers*
 FOR
**SCHOOLS of BEAUTY
 and ECONOMY**

Any school in America would be proud to have cheerful, friendly rooms like these. And any school can have them within the limits of a modest building budget—indeed, might even make a substantial saving over less attractive, permanent construction.

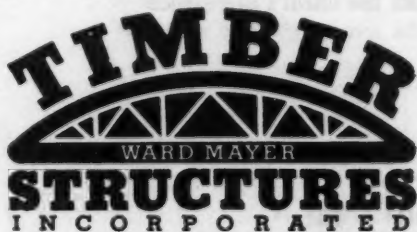
All three rooms are framed by glued laminated timbers which, in addition to their obvious beauty, give the school—

ECONOMY: Composed of plentiful, moderately priced wood, these timbers are completely fabricated at the factory. They cut jobsite labor costs, giving you all the economies of modern functional construction.

PERMANENCE: Timbers are thoroughly engineered with loadings and stresses carefully calculated and provided for in both the timbers and connecting assemblies.

SAFETY: Heavy timber construction was developed centuries ago to resist destruction by fire, and remains today safest of all unprotected materials.

Let us show you how engineered timber will give you a better school and reduce construction costs. See the nearest Timber Structures representative, or write for the informative booklet, "Modern, Functional Schools."



P.O. BOX 3782-A, PORTLAND 8, OREGON

Offices in Ramsey, N.J.; Garden City, N.Y.; Chicago; Ferndale, Mich.; Kansas City; St. Louis; Minneapolis; Columbus; Des Moines; Decatur; Wichita; Dallas; Houston; Birmingham; Charlotte; Memphis; West Hartford; Boston; Seattle; Spokane.

TIMBER STRUCTURES, INC., OF CALIFORNIA • Richmond, Calif.
 Local Representatives Throughout the United States and Canada

TIMBER STRUCTURES, INC.

P.O. Box 3782-A, Portland 8, Oregon

Please send me your booklet, "Modern, Functional Schools"

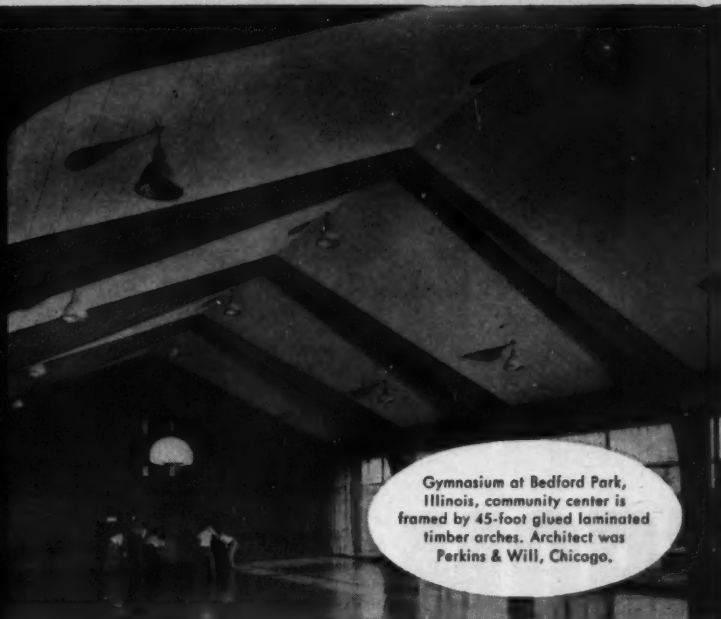
Name _____

Company _____

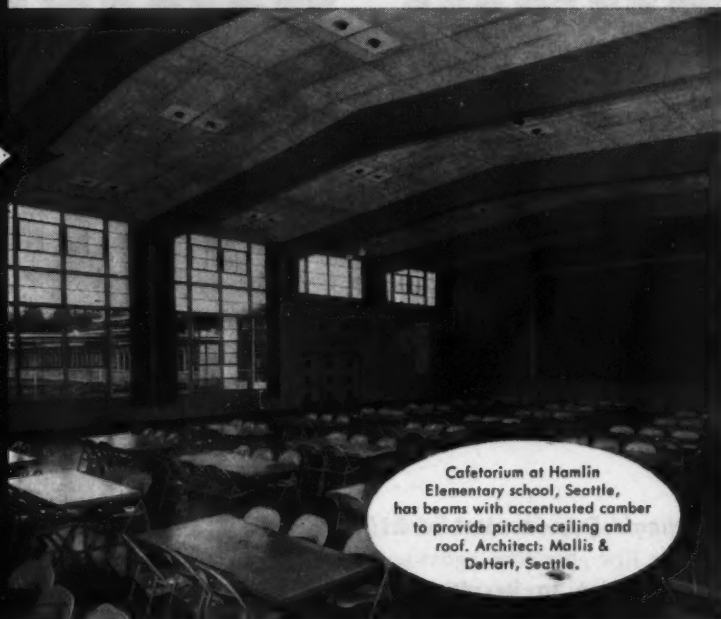
Address _____

City _____

State _____



Gymnasium at Bedford Park, Illinois, community center is framed by 45-foot glued laminated timber arches. Architect was Perkins & Will, Chicago.



Cafeterium at Hamlin Elementary school, Seattle, has beams with accentuated camber to provide pitched ceiling and roof. Architect: Mallis & DeHart, Seattle.



Library of A. L. Lewis elementary school, Homestead, Florida, is distinguished by novel arrangement of laminated timber beams and braced column bents. Architect: W. D. Bordeaux, Miami.

How much hinge does a door need?



It depends upon door weight and frequency of use

When the door is heavier than the conventional type, or is equipped with a door closer, or is a high-frequency door (over 400 times daily) in the entrance to a department store, office building, theater, school, or other public building, it should hang on the finest heavy-duty hinges available.

What are the finest heavy-duty hinges?

Stanley full-jeweled ball-bearing hinges*

The Stanley full-jeweled ball-bearing hinge is the only hinge that takes care of *all* wear solely through ball bearings.

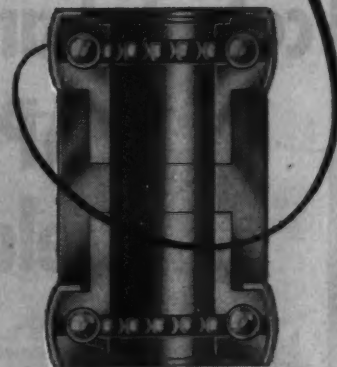
It is made so that both lateral and vertical stress are transmitted to the bearings — there is no direct pressure on the pin. The cutaway view shows how the specially built-up raceways shoulder the load to the bearings.



What does this mean to a building?

It means hinges that won't wear out

They are moisture proof, dust proof, and squeak proof. They last for the life of the building *and* they COST NO MORE. When you specify hinges, specify Stanley and where needed specify Stanley full-jeweled ball-bearing hinges.



REMEMBER  THREE HINGES TO A DOOR

STANLEY Hardware

A Division of The Stanley Works, New Britain, Connecticut

TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL

*Reg. U.S. Pat. Off.

a pilot's eye view of the San Francisco International Airport

Basic Plan by Public Utilities Commission, City & County Of San Francisco

Design by Wm. P. Day, Architect-Engineer



**100,000
square feet of
colorful and permanent
SEAPORCLAD
porcelain panels**



Let Seaporcel's successful applications be your guide to future planning
Write for brochure #21

An airport has to stay modern looking through the years! That's why the San Francisco Airport selected SEAPORCLAD for its piers and concourses as well as for its air mail and cargo building. These panels harmonize and enhance every other material used in the design of the airport and the cost of maintenance is practically nil!

Construction: Seaporclad-Seaporcel Porcelain Face Skin, Galvanized Back Skin, Hot Plate Press Laminated to Aluminum Honeycomb Core.
Size: Panels—Principally 2'-9" wide x 5'-10" high x 3/4" thick.
Waterproofing: Flashing Flanges and Mastic in 1/8" Joints.
Color: Buff, Semi-Matte, Terra Cotta Texture.

**For Some Job... Somewhere...
You Can Use SEAPORCEL***

Seaporcel

ARCHITECTURAL PORCELAIN

Member: Porcelain Enamel Institute

SEAPORCEL METALS, INC.
2800 Borden Avenue
Long Island City 1, New York

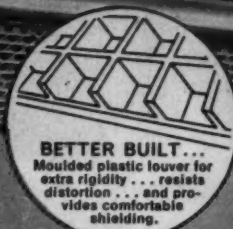
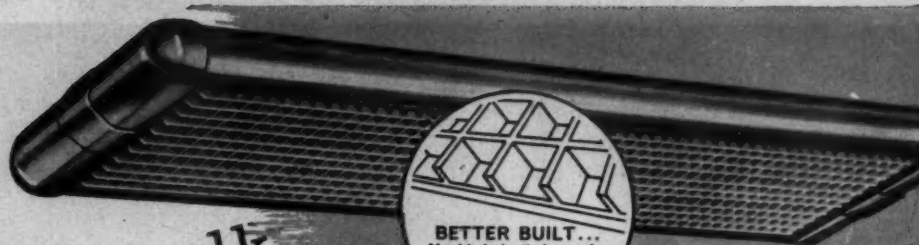
A. F. OF L. METAL FABRICATING & ENAMELING PLANT

*Reg. U.S. Pat. Off.

COMPLETE ENGINEERING & ERECTION DEPARTMENTS

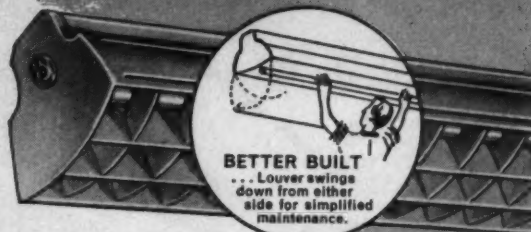


let's talk
business about



BETTER BUILT...
Moulded plastic louver for
extra rigidity... resists
distortion... and pro-
vides comfortable
shielding.

The OFFICER
—a trim, slender fixture to provide
distinctive lighting to commercial
interiors.



BETTER BUILT...
... Louver swings
down from either
side for simplified
maintenance.

The SCHOOLMASTER
—an all-steel unit which
provides upward light for
comfort lighting. Ideal for
close seeing.

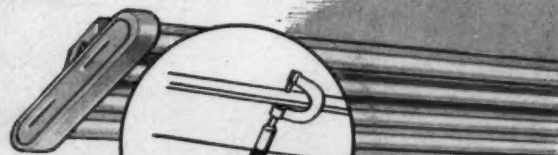
what makes **BETTER BUILT** Lighting Units

BETTER BUSINESS for YOU!

It is good business to insist on units with "Better Built" features like those illustrated here. That's because such features help cut operating costs, speed up and simplify maintenance, and insure reduced obsolescence and long-life dependability.

It is good business for the user, because such units give better service and save more money. It is good business for those who recommend and install lighting equipment, because the installation of such units results in greater satisfaction and increased good will.

Shown here are but a few Benjamin Leader Line units, each with just one of its "Better Built" features. Manufacturing "Better Built" lighting equipment is a tradition with Benjamin. That's why you can rely on getting Benjamin Quality in every Leader lighting unit.

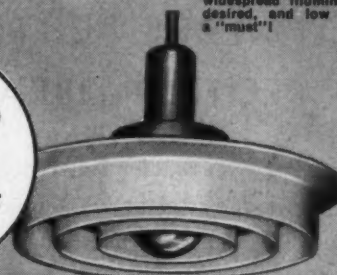


BETTER BUILT...
... 18-gauge steel con-
struction for greater
strength and rigidity.

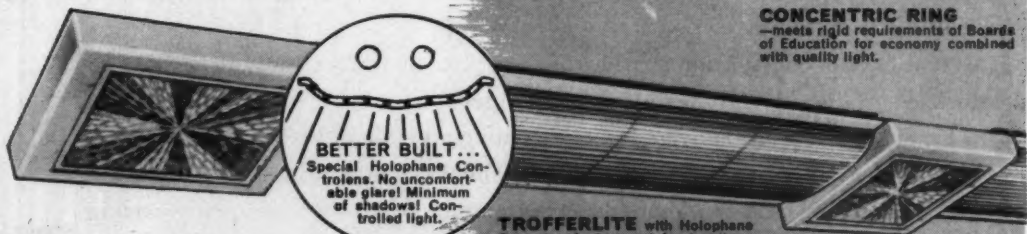
**HIGH LEVEL
OPEN SERIES**
—designed for commercial
interiors where maximum
widespread illumination is
desired, and low cost is
a "must"!



BETTER BUILT...
Arrows indicate how air
circulates to prevent
dust from collecting.



CONCENTRIC RING
—meets rigid requirements of Boards
of Education for economy combined
with quality light.



BETTER BUILT...
Special Holophane Con-
trolens. No uncom-
fortable glare! Minimum
of shadows! Con-
trolled light.

TROFFERLITE with Holophane
Controlens—designed for locations
where controlled quality lighting is
desired.

*Copr., the Holophane Co.

For a complete showing
of the Benjamin Leader Line,
send for our **FREE CATALOG**.



BETTER BUILT
TO SERVE YOU BETTER

Exclusive licensee of the Leader Line in Canada:
Robertson Irwin Limited, Hamilton, Ontario

BENJAMIN
TRADE MARK
Leader Line

Sold Exclusively through Electrical Distributors

Leader Division of Benjamin Electric Manufacturing Company, Dept. Q-1, Des Plaines, Illinois... makers of
famous Benjamin and Leader Line lighting equipment and sound signals for Industry, Institutions and Commerce.

D-667R



Bradley University's new library building at Peoria, Ill. Architect: Gregg & Briggs; General Contractor: V. Jobst and Sons, all of Peoria.

FLOORS BUILT WITH OPEN-WEB JOISTS PROTECT LIBRARY FROM FIRE HAZARD

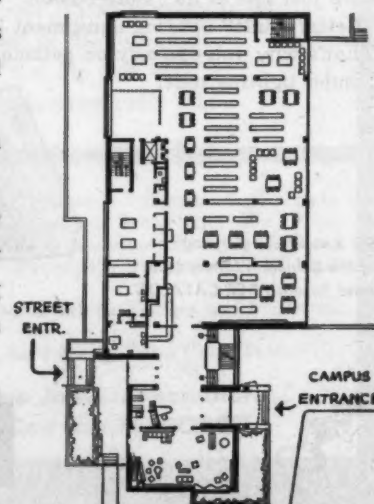
The new library at Bradley University, Peoria, Ill., is a three-story, completely air-conditioned, brick-and-steel building of contemporary design, with a capacity for 150,000 volumes. To protect the library and its contents from the hazard of fire, the architects specified floors built with Open-Web Steel Joists combined with concrete floor slab and vermiculite plaster ceiling.

This type of floor construction provides fire-resistance up to four hours, depending on the thickness of the slab and the kind of plaster used.

The architects also gained other advantages through the use of Bethlehem Open-Web Joists. The floors must support heavy loads of books, and the steel joists have the required strength and rigidity without danger of warp or sag, at the same time providing large areas of column-free space, with consequent freedom for rearrangement of stacks and non-bearing walls to meet changing requirements.

In addition, the use of steel joists helped to reduce building costs. The joists reached the job site fully marked, ready for placing, and the installation of ductwork for air-conditioning and of wiring was simplified by running them through the open webs.

This plan of the first floor shows how easily the floor space can be rearranged without disturbing the permanent structure.



BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. Export Distributor: Bethlehem Steel Export Corporation

BETHLEHEM OPEN-WEB STEEL JOISTS



These are typical

Adlake

reversible window
installations

**Here's why YOU should specify
Adlake reversible windows**

Never need paint!
They last the life of the building

Never rust, never rot!
Because they're made of aluminum

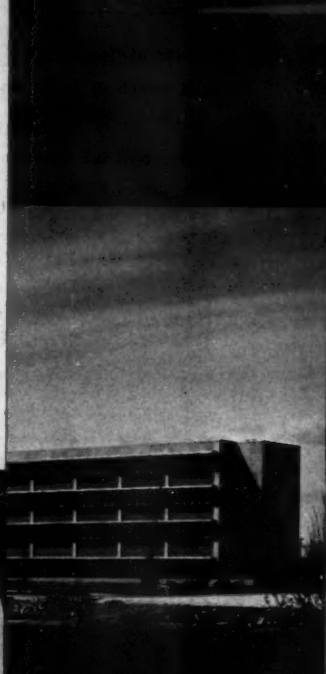
Cut window cleaning time!
All cleaning is done *inside* the building

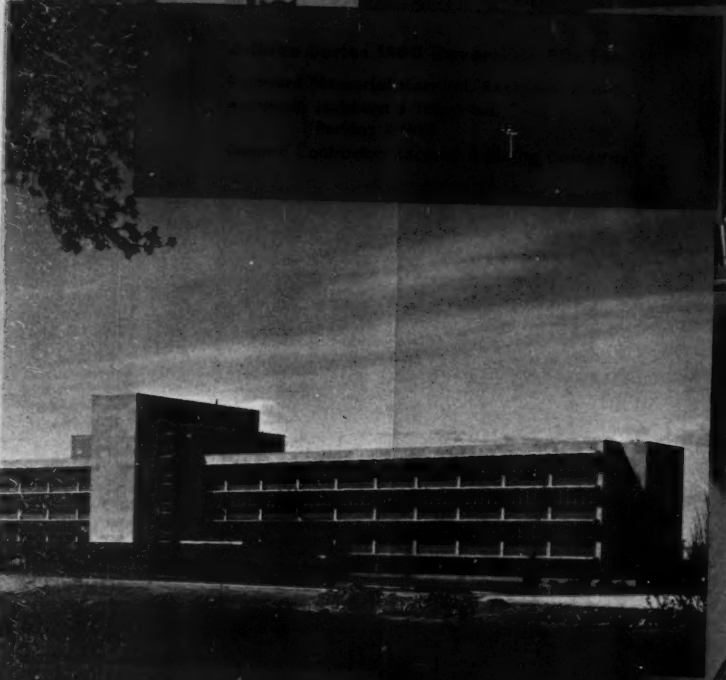
Slash liability insurance rates!
No window cleaning hazards

Never rattle, never stick!
Easy to operate

Easy to install!
Ready to be fitted in openings

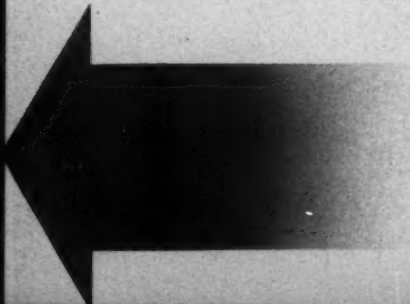
Reduce air conditioning and heating costs!
Less air infiltration



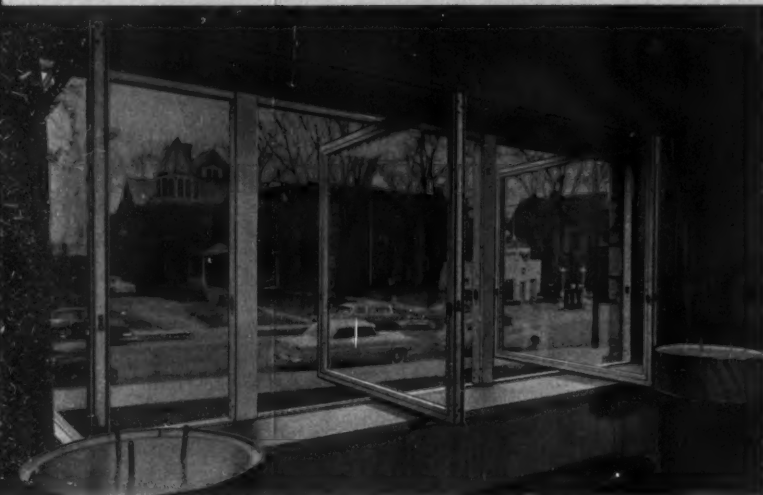




*The revolutionary **Adlake** reversible windows*

- 
- slash cleaning costs
 - eliminate maintenance
 - reduce air conditioning and heating costs
for these outstanding buildings!

*One of these types of Adlake reversible windows
is the right choice for your building!*



The Adlake Series 1000 Reversible Window

All aluminum construction with double weatherstripping of guaranteed non-metallic rubber impregnated fabric, permanently bound in an aluminum binder which may be easily removed. Window may be cleaned completely in a few seconds, from the *inside*. Between washings, windows are securely locked by special locking devices, to prevent unauthorized operation.



The Adlake Series 1500 Reversible Window

Identical with the Series 1000 Window, but is equipped with a vent below or above, for ventilation when required.



The Adlake Series 2000 Reversible Window

This aluminum window features an exclusive inner-tube principle of weatherstripping that gives dependable, positive weather seal, reducing air-conditioning and heating capacity requirements to an absolute minimum. Cleaners may deflate tube and reverse the window for cleaning in a few seconds.

*All Adlake Reversible Windows are
available for double glazing, if desired.*

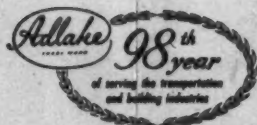
SEE SWEET'S ARCHITECTURAL FILE for complete information, or write:

The Adams & Westlake Company

Established 1857 • ELKHART, INDIANA • New York • Chicago

SALES OFFICES: 319 W. Ontario Street, Chicago, Illinois • 224 Penobscot Bldg., Detroit, Michigan

Sales Representatives in principal cities



Newest way to create horizontal accent...economically
hardwood plywood paneling
offers great
design opportunities

NEW
FACTORY
FINISHED **Craftwall**

IF you are designing modern interiors for residences, offices, institutions or commercial establishments, Roddis Factory-Finished Craftwall offers many practical and economical design opportunities — whether the project is new construction or modernization.

Roddis Craftwall is designed for vertical and horizontal applications. Many interesting combinations of both applications can be developed. The various styles and sizes cut economically — reduce waste and installation time.

Roddis Craftwall is as beautiful as it is practical. Made in 8 handsome hardwoods and Knotty Pine, it is factory-finished to bring out the natural beauty of the wood and provide a durable, long-lasting finish that requires a minimum of maintenance. Stock items in hardwood moldings and trim to match are available. Write us today for full particulars.

Craftwall
design suggestions . . .
No. 2 of a series

Paneling illustrated is Cherry Craftwall, Style 400 with matching V-grooves for horizontal installation. It is only one example of the many ways Craftwall makes better interiors possible.

Roddiscraft

RODDIS PLYWOOD CORPORATION
Marshfield, Wisconsin

WAREHOUSES IN PRINCIPAL CITIES
Consult your Classified Directory

WORLD'S

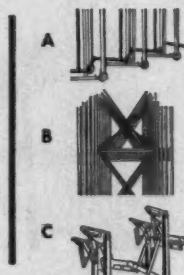
installation of folding



USES HORN

Folding Gym Seats!

Every feature
of Horn Folding Gym Seats
is a reason by itself
for Elkhart's choice!



SAFETY. All-steel under-structure of (A) tubular column supports and (B) cross tie angles and bracing (no sway, shimmy or shaking). Exclusive positive lock made of steel (C) automatically locks each row as it opens and closes.

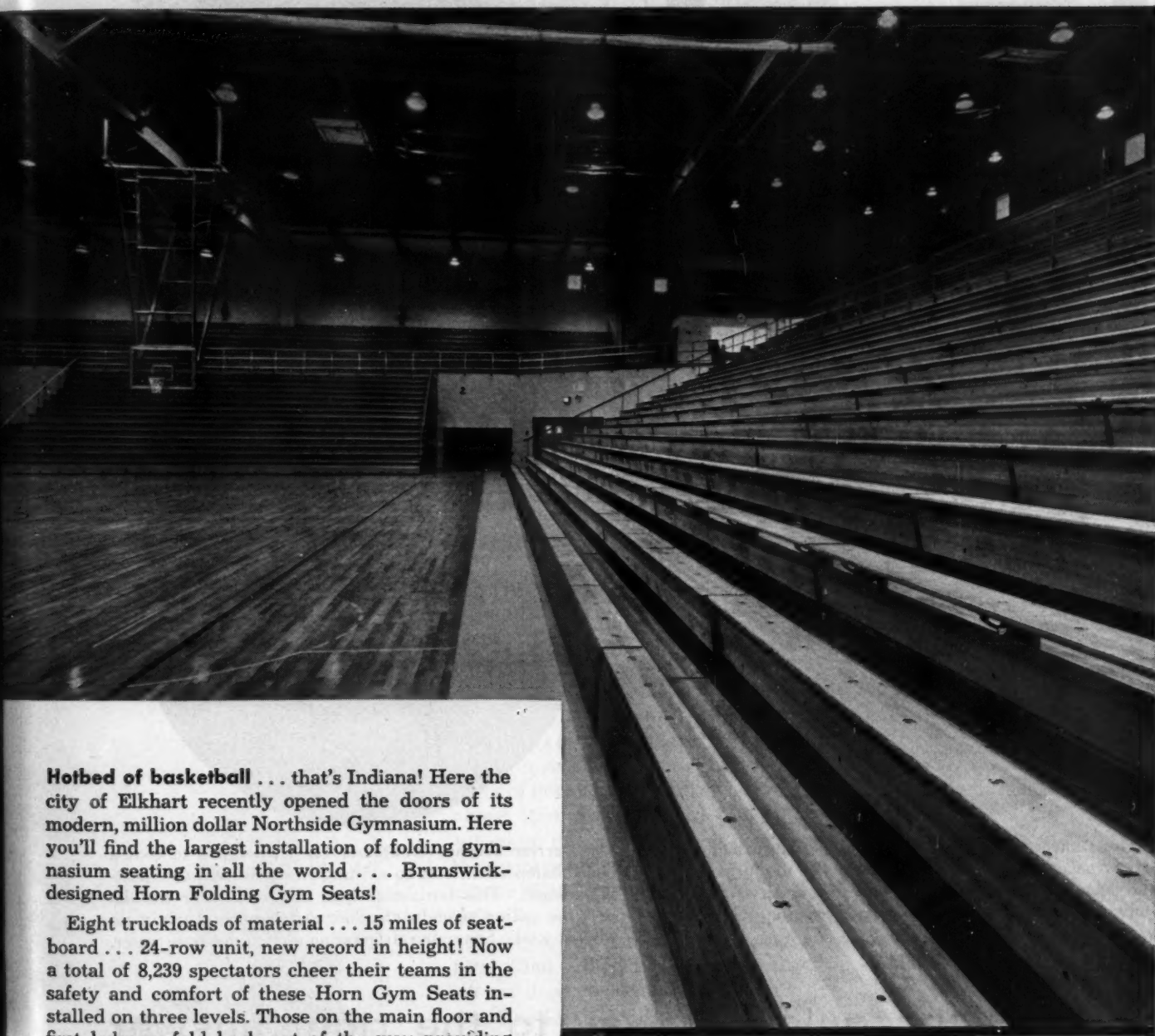
COMFORT. Spectators sit in chair-height comfort,

move legs freely. Custom-fitted for your needs from a choice of 9", 11" or 11½" rise and 22" or 24" spacing.

EASE OF OPERATION. One smooth flow of pressure to close . . . seatboards remain flat, footboard tilts vertically, new riserboard swings out to form closed surface. Non-marring wheels.

LARGEST

gym seats at Elkhart



Hotbed of basketball . . . that's Indiana! Here the city of Elkhart recently opened the doors of its modern, million dollar Northside Gymnasium. Here you'll find the largest installation of folding gymnasium seating in all the world . . . Brunswick-designed Horn Folding Gym Seats!

Eight truckloads of material . . . 15 miles of seat-board . . . 24-row unit, new record in height! Now a total of 8,239 spectators cheer their teams in the safety and comfort of these Horn Gym Seats installed on three levels. Those on the main floor and first balcony fold back out of the way providing five basketball courts in all.

Horn Folding Gym Seats were made to do the biggest job best! Custom-made to the exact specifications of Brunswick design engineers. And Brunswick has added to these gym seats even more refinements for greater safety, comfort and ease of operation . . . better appearance . . . less maintenance.

No problem is too simple or too complex for a Horn solution . . . no gym too small or too large for an installation of Horn Folding Gym Seats. Why not talk it over person-to-person? Write or wire today for the name of your nearest Horn agent.

Free! "Horn Folding Gym Seats" . . . catalog of facts, yours for the asking. Write today!



Division of
**THE BRUNSWICK-BALKE-
COLLENDER COMPANY**
623 South Wabash Avenue, Chicago 5, Illinois



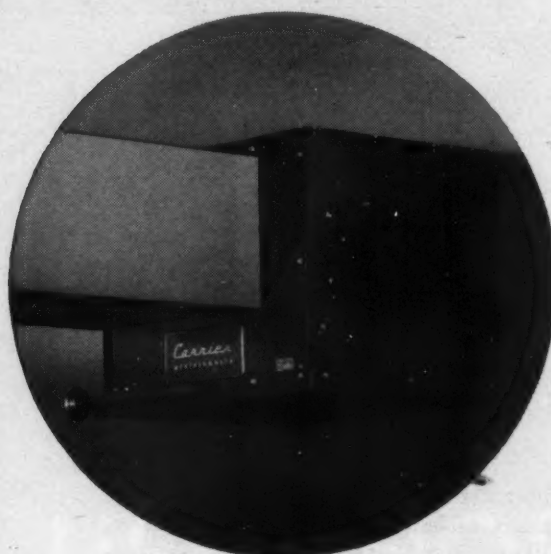
Which is the
best way to
air condition
a HOUSE?



The Carrier Year-round Weathermaker* burns gas or oil, cools electrically. It fits in a square yard, is available both water and air cooled. You can use it on a renovation job to replace an antiquated furnace. Or you can design a new Carrier Weathermaker Home around it.



The Carrier Conversion Weathermaker adds-on to existing warm air furnaces. A cooling coil section fits on the furnace or in the duct work. An air-cooled condenser and refrigerating unit may be installed in a remote location. Small refrigerant lines connect the two units.



The Carrier Summer Weathermaker is designed to cool a house independently of an existing steam or hot water heating system. This horizontal type air conditioner installs over the ceiling or under the floor and requires a minimum of duct work. Separate refrigeration section needs no water.

Carrier is the quickest way to the right answer

**JUST 1-2 AND THE
JOB IS THROUGH!**

Carrier has *all* the ways to air condition *any* job—and all Carrier equipment is engineered to the same uniform standard. So short-cut hours of selection by (1) using the Carrier line as your shopping guide and then (2) comparing values. Get in touch with your Carrier dealer or distributor. He's listed in the Classified Telephone Directory. Or write to us directly. Carrier Corporation, Syracuse, New York.

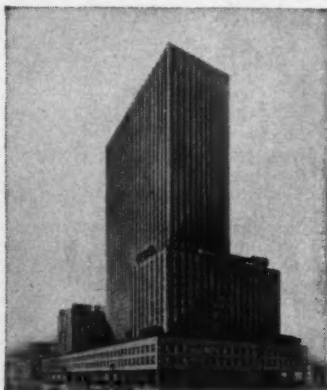
* Reg. U.S. Pat. Off.



air conditioning • refrigeration • industrial heating



We like the door's "electronic politeness"



SOCONY-VACUUM BUILDING
New York City

The new 42-story SOCONY-VACUUM BUILDING will have 32 Otis AUTOTRONIC operatorless elevators. This is the largest of more than 175 new and modernized office buildings, hotels, hospitals, banks, and department stores that have given AUTOTRONIC elevators an overwhelming vote of confidence—by buying it!

Owner: Galbreath Corporation
(John W. Galbreath—Peter B. Ruffin)
Architects: Harrison & Abramovitz
John B. Peterkin—Associate
Builder: Turner Construction Company

Passengers quickly discover why they like the Otis Electronic Elevator Door. It's the invisible *electronic zone of detection* that extends in front of the leading edges of both car and hoistway doors up to shoulder height—as shown in phantom above. It inspires passenger confidence.

Whenever this *electronic zone* detects a person's presence in the doorway, the doors politely reverse before they can touch the passenger. But if there is no chance of passenger interference, the doors close promptly after each stop.

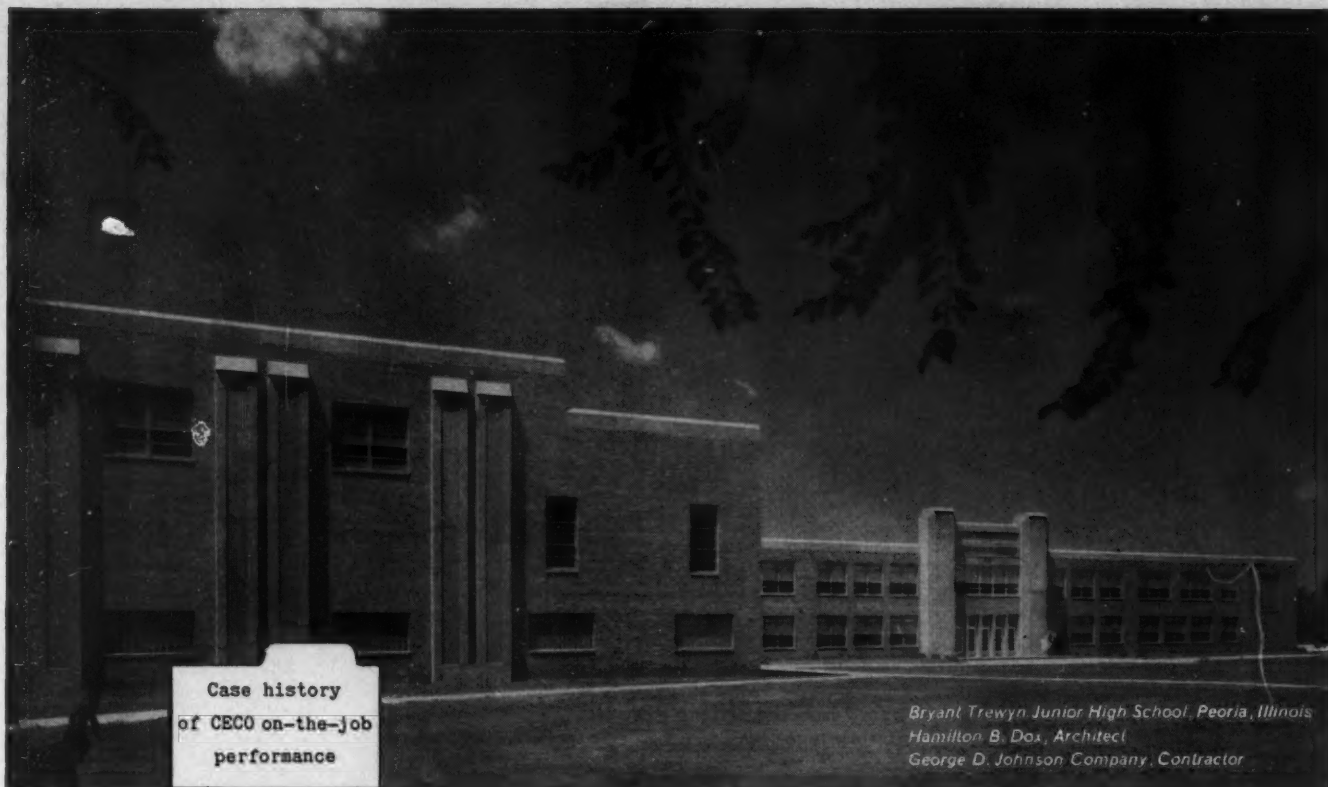
This *zone of detection* prevents unnecessary delays. If a talkative passenger lingers overlong in the doorway, a buzzer sounds and the doors slowly, firmly—but politely nudge the passenger out of the doorway so that the car can proceed on its way.

The Otis Electronic Elevator Door is the crowning achievement in the field of the operatorless elevator. Its successful development insured the ability of operatorless elevators to move great masses of people in busy buildings with the greatest degree of safety. Ask any of our 268 offices for details.

Otis Elevator Company, 260 11th Ave., New York 1, N. Y.



COMPLETELY AUTOMATIC
AUTOTRONIC®
ELEVATORING



problem : meet a school building budget

Ceco products...

solution : saved 30% in concrete
saved 30% in deadload
saved 30% in roof costs

CECO PRODUCTS USED

Open-Web Steel Joists
Steel Roof Deck
Reinforcing Bars and Welded Wire Fabric
Meyer Steelform Service
Steel Architectural Projected Windows
Metal Lathing Products



In construction products
CECO ENGINEERING
makes the big difference

CECO STEEL PRODUCTS CORPORATION


Offices, warehouses and fabricating plants in principal cities
General Offices, 5601 W. 26th Street, Chicago 50, Illinois

When a school building budget demands costs be cut to the bone, savings must be made from the ground up. And that is what Architect Hamilton B. Dox did with the Bryant Trewyn School. First there was the matter of basic structural methods. The architect and contractor brought Ceco into the planning—and together worked out the most efficient ways to frame the floors and roofs.

Ceco Steel Joists, chosen for classroom areas . . . saved 30% in concrete compared to heavy concrete framing—saved 30% in deadload—saved two months' erection time.

Ceco-Meyer Concrete Joist Construction, selected for the gymnasium area—provided rigidity—fire safety—speed—efficient design to reduce deadload . . . offered equally important savings. Then decking got the critical eye. When pre-cast concrete design was compared with Ceco Steel Roof Deck, a saving of 30% in cost was chalked up for the Ceco method. Standard Ceco Architectural Projected Windows were chosen to eliminate the extra cost of special fabricating. Ceco Service met the construction schedule to the day—another example of saving through planning.





DP

DICKS-PONTIUS

for 87 years, supreme quality

- GLAZING COMPOUNDS
- CAULKING COMPOUNDS
- PUTTIES ● MASTICS
- SEALING COMPOUNDS

Specify D-P with complete confidence

See Sweets Architectural File, $\frac{6C}{DI}$ for complete
Dicks-Pontius product descriptions and specifications—
or write direct for your personal copy of our catalog.

The Dicks-Pontius Company • Dayton, Ohio
Alexandria, Va. • Decatur, Ga. • Dallas, Tex.

SCHOOLS:

San Gabriel, California

ARCHITECTS:

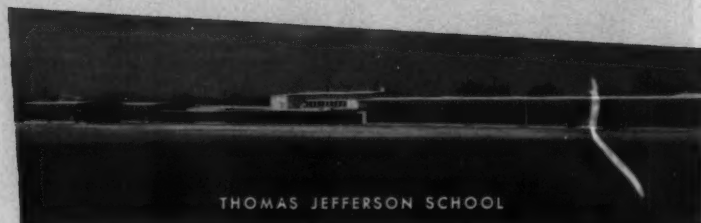
Kistner, Wright & Wright, Los Angeles

MECHANICAL ENGINEER:

Chester D. Walz, Los Angeles

**Janitrol gives
clean, quiet heating
for these schools**

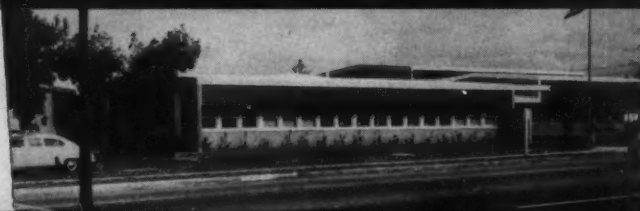
More than ninety schools by this architectural firm and mechanical engineer use this forced warm air system of heating that proves to be most functional and economical. Each room has its own gas-fired conditioner located in a corner closet. This permits individual temperature control for each classroom, according to the student activity.



THOMAS JEFFERSON SCHOOL



JAMES MADISON SCHOOL



GALVIN COOLIDGE SCHOOL

Over 4,000 Janitrol furnaces installed in schools in Southern California since 1948 meet the requirements for quietness, good ventilation and uniform heating; and the extra filter capacity means cleaner air. Also, the schools appreciate the minimum of maintenance and the long life Janitrol gives them.

For design and specification information, write for A. I. A. Files on Commercial and Industrial Gas Heating.



Janitrol Heating & Air Conditioning Division
Surface Combustion Corporation, Columbus 16, Ohio
West Coast: Natural Gas Equipment Co., Pasadena



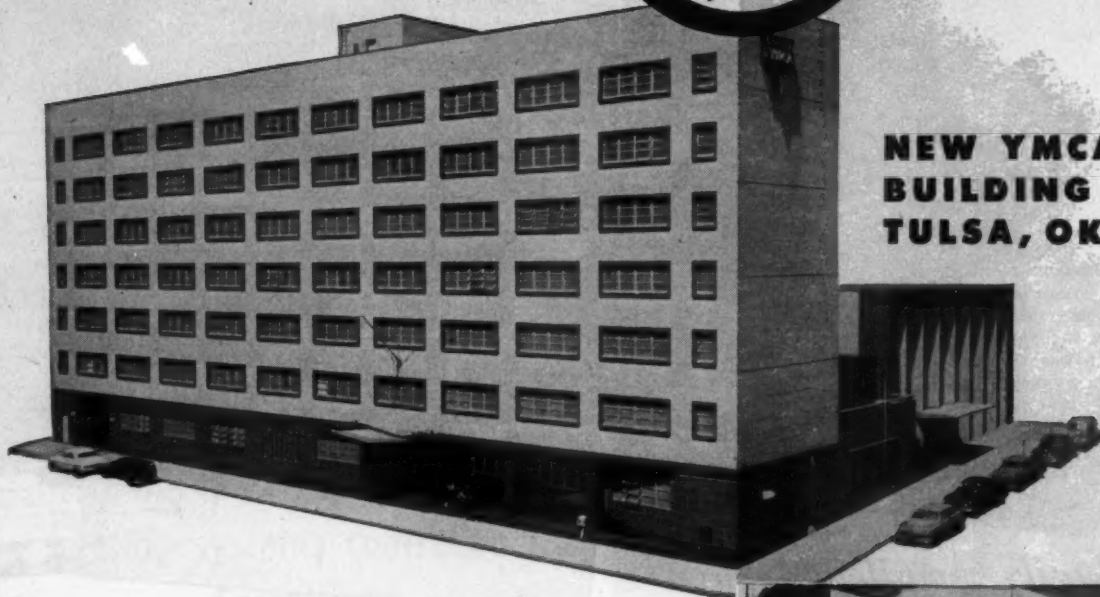
Exterior of corner cabinet containing room conditioner. The two warm air outlets are shown above the woodwork, air return is below access door.

Inside, the compact Janitrol conditioner is completely accessible from the front . . . an outside air inlet supplies combustion air.

for better design . . . see an architect


ALSO MAKERS OF **Surface** INDUSTRIAL FURNACES AND **Kathabar** HUMIDITY CONDITIONING


another outstanding  installation





**NEW YMCA
BUILDING AT
TULSA, OKLAHOMA**

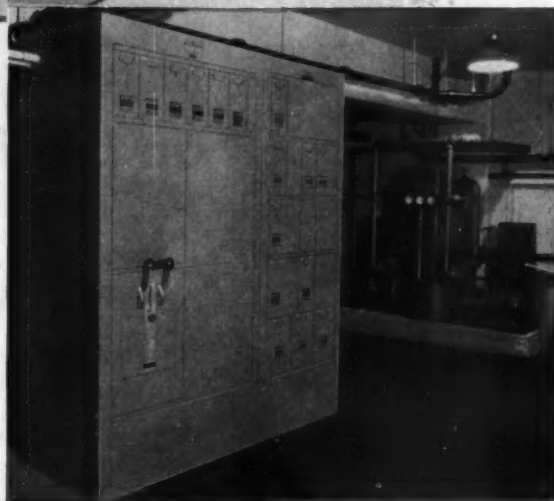
*Leon B. Senter, Tulsa, Architect;
Reg E. Taylor, Houston, Tex., Engineer.*



The new and modern YMCA building in Tulsa, Okla., is the latest addition to the growing list of new and modernized buildings — commercial, industrial, institutional and residential — equipped with  products for the control and distribution of power and light.


Like so many others, officials of the Tulsa "Y" learned, after careful study, that  products were safe, dependable, long-lasting and trouble-free, and that they not only provide for present-day power needs, but allow for future expansion.


The next time you design a building, specify  products for control and distribution of light and power. You'll find it pays.


For further information, consult our catalog in Sweet's or your nearest  representative.



 Switchboard installed in new Tulsa "Y". The complete line of  switchboards includes:

 **SHUTLBRAK** — 30 to 1200 amps., 250 volts AC or DC and 600 volts AC 2, 3 and 4 poles. Rotary type operating handles furnished on 30 to 200 amp. capacities. Straight handles on all others.

 **KLAMPSWITCHFUZ AND SNUFARC** — Klampswitchfuz capacities 30 to 600 amps., 250 volts AC or DC, 2, 3 and 4 poles, single or double throw. Snufarc 30 to 200 amps., 600 volts AC 2, 3 and 4 poles.

 **CIRCUIT BREAKER** — 15 to 600 amps., 250 volts AC or DC and 600 volts AC, 2 and 3 poles.

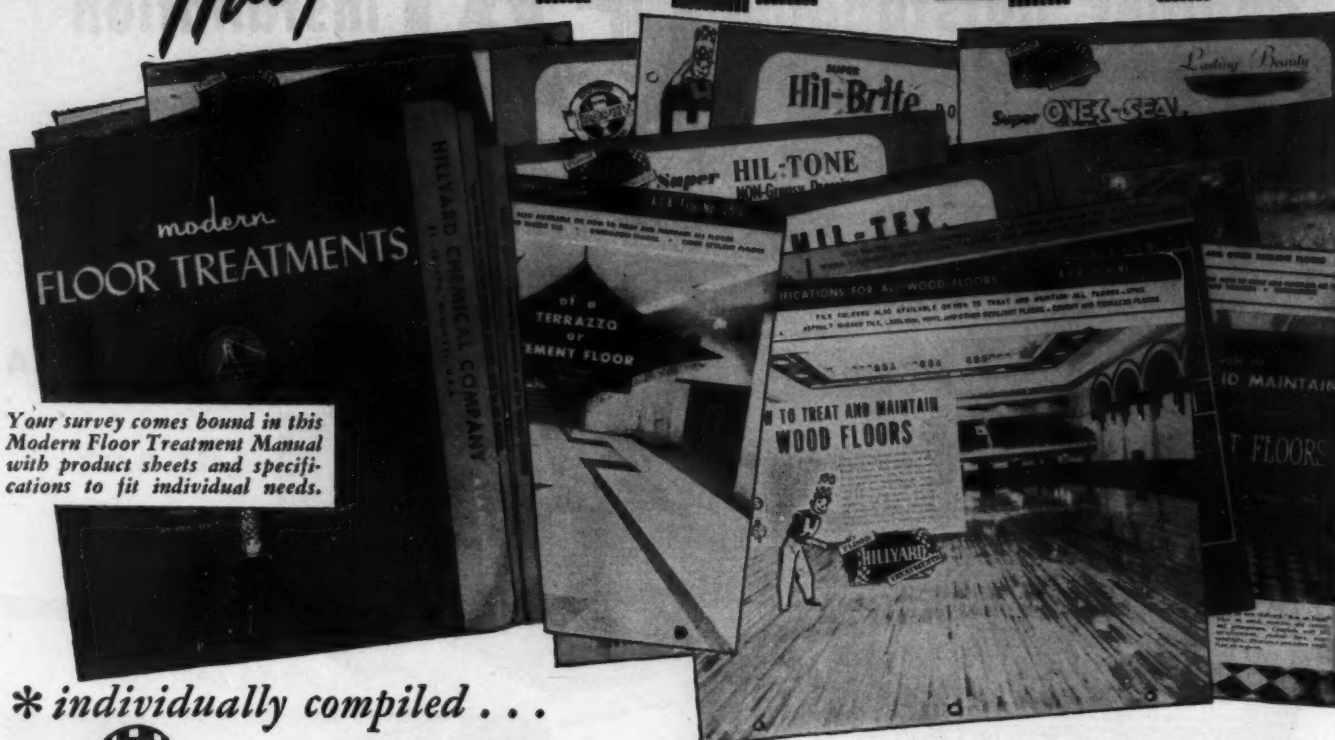
Air circuit breakers used for larger capacities.

Frank Adam Electric Co.

BOX 357, MAIN P. O. • ST. LOUIS 3, MO.

makers of:
busduct • panelboards • switchboards
service equipment • safety switches
load centers • Quikmeter

new *Hillyard* FLOOR SURVEY*



** individually compiled . . .*

to answer architects' questions on particular floor treatments



It's a brand new way to bring just the exact material you need and want for any type of floor installation or problem—without wading through extraneous information.

Hillyard designed this loose leaf style to give you in a moment's time, full product information on any installation you are presently working on—pinpointing results obtainable—outlining treating specifications with exact coverages and pictured procedure steps for your contractors.

You'll find it a great time-saver. An up-to-the-minute factual survey that will prove of inestimable help in keeping the natural beauty you build into every floor installation functioning for a lifetime of traffic wear.

Accept a free floor survey on any installation

The Hillyard Maintaineer
will act as your
JOB CAPTAIN

Hillyard Maintaineers are trained to act as Job Captain on floors without charge. Consult the one nearest you. He's listed in your telephone directory—or write Hillyard direct.



Hillyard maintains a nationwide staff of more than 100 technically trained floor consultants (Hillyard Maintaineers). The one near you is prepared to make a complete floor survey of any installation, free of charge. You can depend on him to furnish reliable approved floor treatment data.

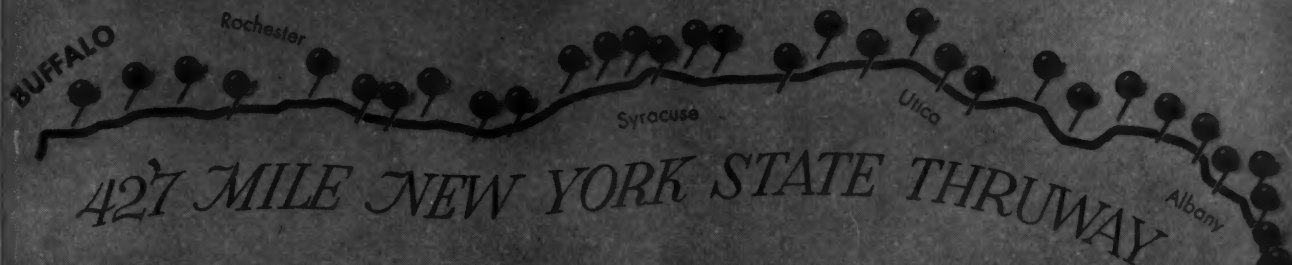
Write or Call Collect for the Name of your nearest

HILLYARD MAINTAINEER

ST. JOSEPH, MO.

*Branches and Warehouse
Stocks in Principal Cities*

From New York to Buffalo ...it's Sarcotherm at every point



**At all 40 toll interchanges
heating systems controlled by
Sarcotherm
Weather-Compensated Systems**



Mechanical Engineers: Syka & Hennessy, Inc., N.Y.C.
• Heating Contractor: Mechanical Installations, Inc.,
L. I. City • Booths by Taller & Cooper, Brooklyn

HERE IN EFFECT is a heating system which stretches from the southeastern to the northwestern extremities of New York State.

It is obvious, therefore, that such a system must be so simple, so fool-proof, so utterly dependable, that any possibility of break-

down or other trouble will be reduced to an absolute minimum.

That is why *reliability* received so much attention from the Thruway's heating engineers. And that is one of the principal reasons why Sarcotherm Weather-Compensated Control Systems are installed in all 40 toll interchanges.

Advantages of Sarcotherm Systems

Easy to install — tailor-made drawings and diagrams of the complete system are furnished for each job.

Easy to maintain — by regular maintenance men, because of simplicity; fewer parts, such as transformers, relays.

Easy to adjust — to any desired setting.

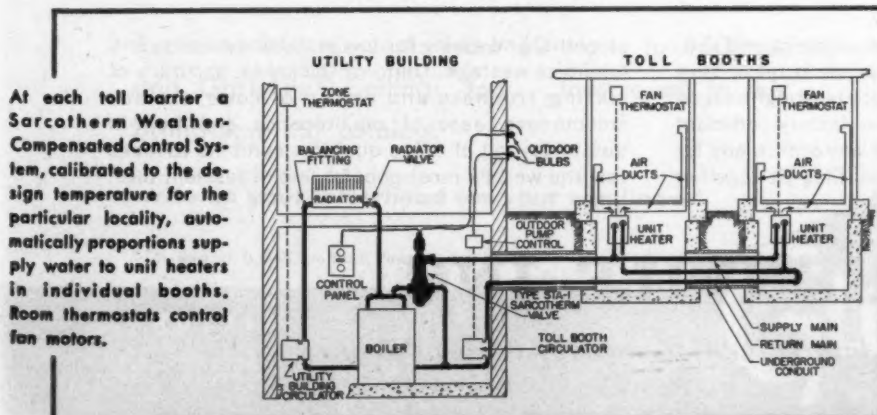
Complete control system — including all specialties such as radiator valves, balancing fittings — all from one manufacturer, Sarcotherm. Unit responsibility.

On the job assistance — to contractors from Sarcotherm's field engineers.

SARCOTHERM CONTROLS, Inc.

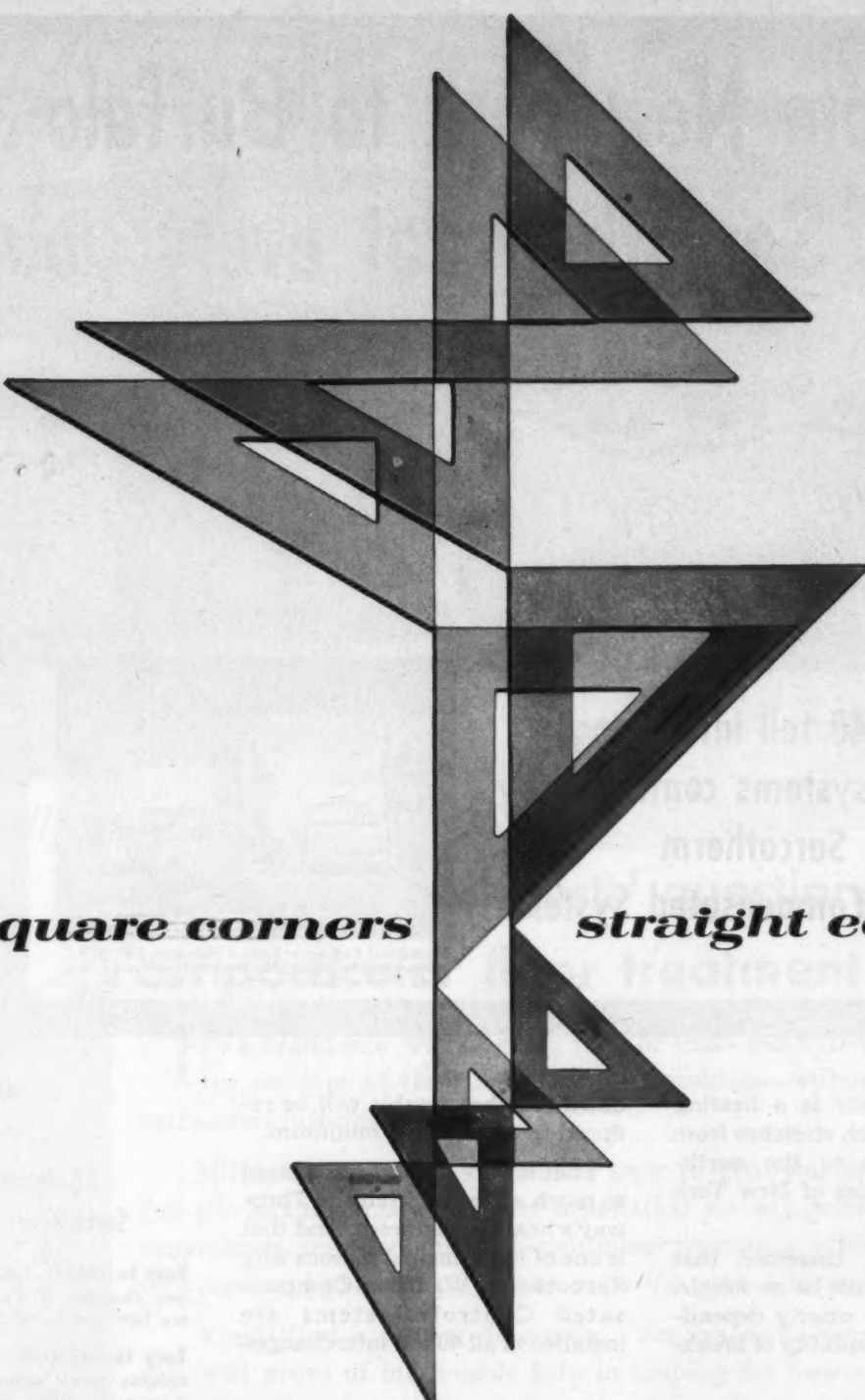
Empire State Bldg., New York 1, N. Y.

An affiliate of Sarco Company, Inc.



At each toll barrier a Sarcotherm Weather-Compensated Control System, calibrated to the design temperature for the particular locality, automatically proportions supply water to unit heaters in individual booths. Room thermostats control fan motors.

Weather-Compensated Control Systems for HOT WATER, RADIANT AND STEAM Heating



square corners

straight edges

High-precision manufacturing equipment and constant laboratory checking enable us to make sure that every resilient tile we produce is straight-edged and square when it leaves the factory; efficient modern packaging keeps it that way until ready for installation. These precision-cut tiles fit together

smoothly and easily for low installation costs, and minimize wastage. Uniform thickness, accuracy of cutting, trueness and clarity of color, surface smoothness, ease of maintenance and built-in durability—all of these qualities combine to make this the world's most popular line of resilient tiles.

KENTILE, INC.

America's largest manufacturer of resilient floor tiles

KENTILE: Asphalt Tile • KENCORK: Cork Tile for Floors and Walls • KENRUBBER: Rubber Tile • KENFLEX: Vinyl Asbestos Tile • KENFLOR: Vinyl Tile... also available by the yard • SPECIAL KENTILE: Grease-proof Asphalt Tile • THEMETILE, KENSERTS: Decorative Inserts • KENCOVE: Vinyl Wall Base • KENBASE: Wall Base



big, new recess catalog no. 50—now ready for YOU....

Your source of inspiration for unlimited pattern planning!
Keep the great GUTH TROFFER LINE at your fingertips:

1 x 4's—2 x 4's—4 x 4's

1 x 2's—2 x 2's... all recessed from top to bottom.

Recessed incandescents from 60 watts to 1500 watts,
and GrateLite* Ceilings, too... they're all in this
brand-new big catalog.

write on your letterhead for your copy now!

*TM Reg. U. S. & Can. Pats. Pend.

TRUSTED

Guth



Pella[®]

WOOD CASEMENT WINDOWS

Windows that "store" their own screens and storm sash

When you specify PELLA CASEMENTS, you eliminate seasonal window chores. Self-storing storm sash stays in place all year around. Built-in RolSCREENS roll up and down like window shades. Patented hinge design makes it possible to wash the exterior glass from inside.

PELLA CASEMENTS are the highest, widest, most handsome casements available. Glass sizes range up to 24" x 60". Think of the opportunity for distinctive design! The wide range of Pella sizes, used singly or in a combination, makes it possible to create perfect window proportions for every architectural design concept.

PELLA CASEMENTS fit snugly in all types of wall construction. They are completely assembled and fitted at the factory. There is no costly hardware fitting on the job. Welded steel outer frame reinforces the wood frame to provide maximum rigidity. Sturdy pine sash are constructed with glued mortise and tenon joints. Investigate today. See our catalog in Sweet's or write: ROLSCREEN COMPANY, Dept. G-1, PELLA, IOWA.



ROLSCREENS—All Pella Casements are equipped with inconspicuous Pella RolSCREENS—the original self-storing inside screens that need no putting up, taking down, repairing or storage.



DUAL GLAZING—The year-round Pella self-storing storm window protects against winter cold and summer heat. Reduces street noises up to 40%.

Pella[®]

WOOD CASEMENT WINDOWS

THE MEANS TO AN END

V-LOK

STEEL FRAMING

AHEAD OF SCHEDULE

**INTERLOCKING STRUCTURAL
MEMBERS SPEED ERECTION**

V-LOK is an ENGINEER'S ANSWER to many structural design problems—like the average school job for example where the frame is up and roofed in—ready for crafts to move in—in about three days. V-LOK fits smoothly into dimension, load and span requirements whether you have a school, supermarket, warehouse, factory or commercial structure of any kind.

For the bid that wins and an all-time record for your General Contractor—V-LOK is your practical answer.

50,000 sq. ft.
erected and
one-third under
roof.

A STEEL FRAME COMPLETE IN FIVE DAYS.

A coast-to-coast experience record awaits your V-LOK inquiry. Dimensions and loading information will be appreciated.

ORIGINATORS OF THE

OPEN WEB STEEL JOIST

STANDARDIZED STEEL

V BAR JOISTS • LONGSPANS

BUILDING PRODUCTS

STEEL TRUSSES • STEEL DECK

MACOMBER INCORPORATED

CANTON 1, OHIO

• ENGINEERING • FABRICATING AND ERECTING •

Vina-Lux floors give a lilt to living



Vina-Lux matches carefree living with carefree floors—floors that catch the eye, cushion the feet, and generally add to the rich comfort of good living.

No waxing chore for this floor—it was born with its glamorous beauty *built-in*. No tedious scrubbing—it cleans with simple, quick mopping—stays clean longer, gives you more time for relaxation.

Vina-Lux is a product of *today*—a vinyl asbestos triumph over old-fashioned cleaning methods—a brilliant color partner with today's new fabrics

and decorative ideas—an enduring challenge to tomorrow's use and abuse.

For more information about Vina-Lux, America's leading vinyl asbestos tile—send for the Vina-Lux Catalog, with color chart and product data.

Vina-Lux®
REINFORCED  VINYL TILE

AZROCK PRODUCTS DIVISION • UVALDE ROCK ASPHALT CO.
FROST BANK BUILDING • SAN ANTONIO, TEXAS
MAKERS OF VINA-LUX • AZROCK • DURACO • AZPHLEX

HOW CAN HE LEARN

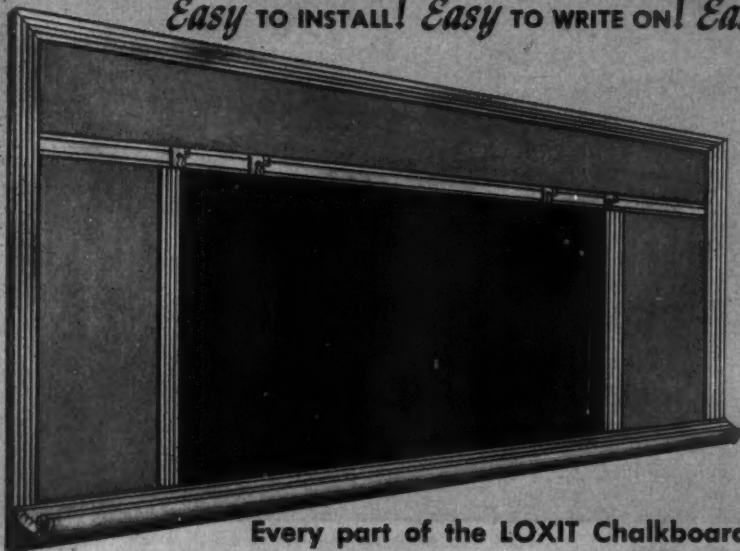
*if he cannot see what
has been written on
the CHALKBOARD?*

Poor marks do not always indicate laziness or lack of intelligence. Perhaps this lad just can't see the writing on the chalkboard. The glare and reflections peculiar to many chalkboard installations may be the reason. Has the possibility been thoroughly checked in your school?



INSIST UPON **LOXIT-TYLAC CHALKBOARDS**

Easy TO INSTALL! Easy TO WRITE ON! Easy TO SEE! Easy TO ERASE AND CLEAN!



Every part of the LOXIT Chalkboard System is engineered for every other part!

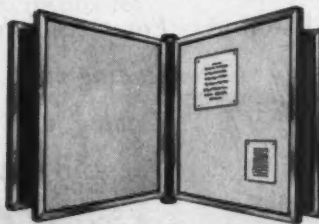
The LOXIT-TYLAC RITE GREEN Chalkboard has an initial reflectance of only 14.5%. After repeated erasures and cleaning, it still tests under 20%. The ideal is 15% to 20%. The smooth, uniform abrasive surface assures easy writing and quick, clean erasing.

The LOXIT Chalkboard System is complete to the last detail. In addition to the chalkboards and tackboards, the system includes metal grounds, extruded aluminum trim and all accessory items. The fully-anodized GLO-DULL finish is permanently beautiful.

ASK YOUR ARCHITECT ABOUT THE COMPLETE LINE OF LOXIT PRODUCTS FOR SCHOOLS



LOXIT HORIZONTAL SLIDING CHALK-BOARDS are available with fixed panel of cork, chalkboard or projection screen. Sliding panels move on cadmium-plated steel roller assemblies. Chalkboard is waterproof and washable—available in two thicknesses: Junior $\frac{1}{4}$ " thick and Senior $\frac{1}{2}$ " thick.



LOXIT SWING-PANEL BULLETIN BOARDS are available with RITE GREEN Chalkboards or TYLAKORK Tackboards, as required. Available in stock units of 4, 5 or 6 panels. Sizes: 36" x 36", 36" x 42" and 36" x 48". Panels swing through an arc of 180°. Metal trim has GLO-DULL aluminum finish.

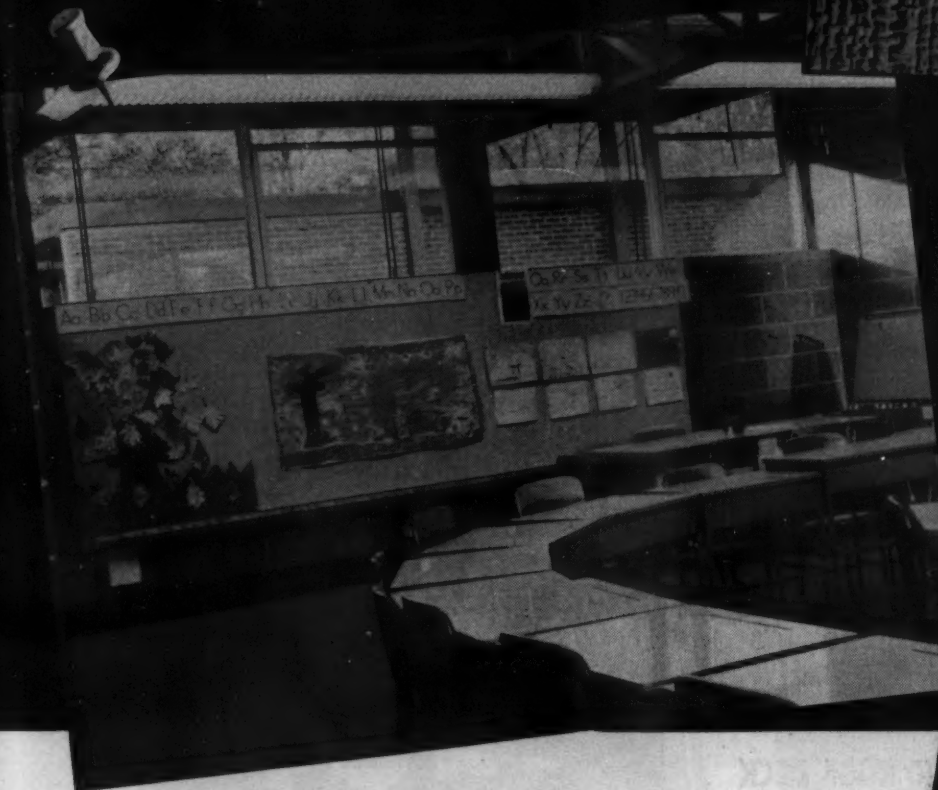
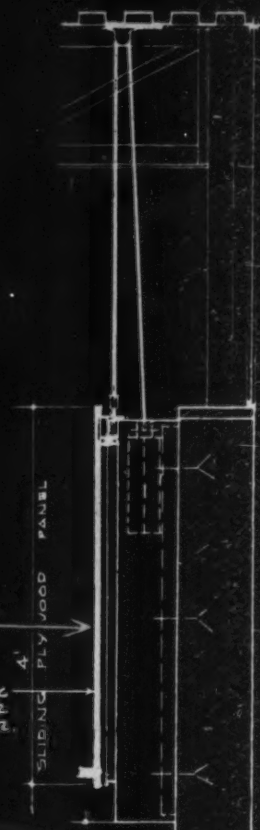
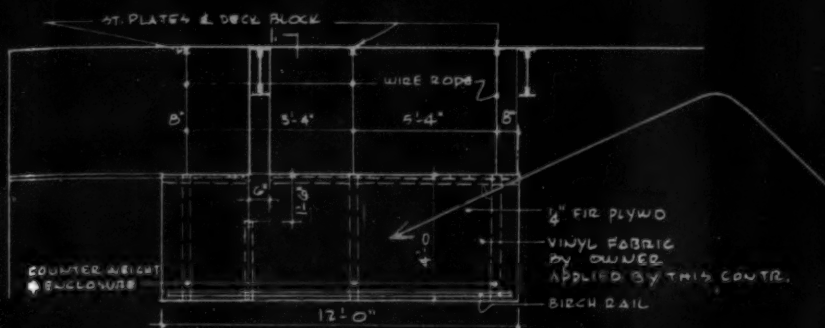


LOXIT-TYLAKORK TACKBOARDS are fabricated from ground cork, compressed under high pressure. Choice of six colors. Pins and tacks go in easily, held tightly—and the holes close when they are removed.

LOXIT SYSTEMS, INC.
1217 W. WASHINGTON BLVD., CHICAGO 7, ILL.



Write for further information,
details and samples



here's how
VICRTEX V.E.F.* FABRICS
help Ketchum, Giná & Sharp
multiply wall space at Hollow Tree School

Detailed specification sheets for Tack Boards available on request; please write for Booklet #1670

Faced with the necessity of having a room serve many purposes, architects Ketchum, Gina & Sharp specified Vicrtex to cover the ingenious panels they designed to multiply wall space at the Hollow Tree School. Vicrtex MADAGASKA on the "black out panels" that hide the youngsters' coats and serve as display tack boards, resists the marks of eager fingers, doesn't even show thumbtack marks! It wipes clean when a new display is in order. Vicrtex V.E.F.* Fabrics are schooled to a multiplicity of uses because they won't fray, chip, peel, or scratch; are stain, flame and soil resistant; practically indestructible. In 36 fadeproof House & Garden colors, over 20 three-dimensional patterns, only Vicrtex gives the correct answer to such a multitude of decorating problems.

WRITE FOR: Carpenter's new Brochure #117-a, "How to Cut Your Decorating and Maintenance Costs." Actual Vicrtex V.E.F.* treatments and swatches included.



L. E. CARPENTER & COMPANY INC.

SALES OFFICE: Empire State Building, New York 1 • LDogoro 4-0080 • MILLS: Wharton, New Jersey

*vinyl electronically fused

WOODWEAVE

See our Catalog in SWEET'S
A. I. A. File #28-C

12m
Ca

SAFARI



**"50% SAVING
IN ROOFING
TIME!"**

C & D Batteries, Inc., plant at Conshohocken, Pa.
Building Contractors: Lloyd F. Kershner, Inc., Norristown, Pa.

**C & D Batteries, Inc., Specifies
CERTAIN-TEED GYPSTEEL PLANK ROOF DECK
for Fast, Fire-Resistant Construction**

Last fall a serious fire destroyed the main building roof and walls on one side of the C & D Batteries, Inc., plant at Conshohocken, Pa. Some 60,000 square feet of floor space was left exposed to the elements. Production had to be temporarily shifted to two other plants in the area.

When rebuilding started, construction speed and simplicity—plus protection against fire—were considered of primary importance. Says Mr. Frank S. Carlile, Vice President and Treasurer of C & D Batteries:

"I suggested Gypsteel Plank

because of the speed of installation... we have a very heavy production schedule to maintain. By using Gypsteel Plank we will save at least 50% of the construction time needed for this phase of building."

Adds Mr. Quillman Kershner, construction engineer in charge of the project:

"I've been working with Gypsteel Plank for about eight years. I like to use it because it is fire resistant and lends itself to easy installation. The tongue-and-groove steel frame is an excellent

principle. It makes for a much tighter 'decking' job."

These are just a few of the advantages Gypsteel Plank offers architects, builders and building owners. Certain-teed Gypsteel Plank is a pre-cast gypsum roof deck reinforced with steel. It is light, strong, fire resistant and provides good thermal insulation. Planks (2" x 15" x 10') are tongued and grooved for quick, easy assembly.

Next time your plans call for roof decking, we'd like to show you how well Gypsteel Plank can meet your requirements. Write for complete information now.

Certain-teed

REG. U.S. PAT. OFF.

Quality made Certain... Satisfaction Guaranteed



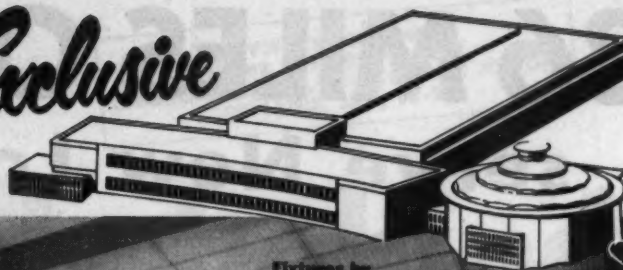
CERTAIN-TEED PRODUCTS CORPORATION

ARDMORE, PENNSYLVANIA

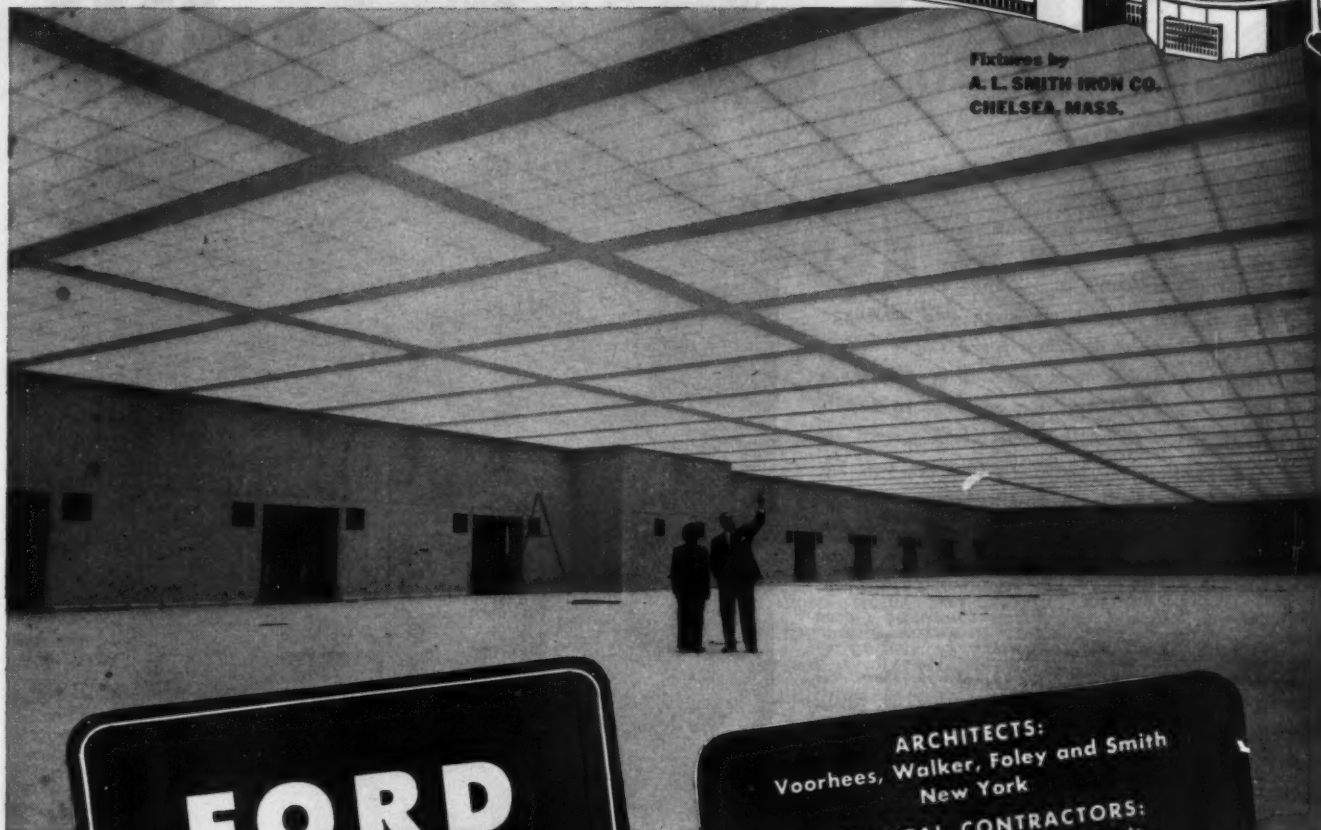
EXPORT DEPARTMENT: 100 EAST 42ND ST., NEW YORK 17, N.Y.

ASPHALT ROOFING • SHINGLES • SIDINGS • ASBESTOS CEMENT ROOFING AND SIDING SHINGLES
GYPSUM PLASTER • LATH • WALLBOARD • SHEATHING • ROOF DECKS • FIBERGLAS BUILDING
AND ROOF INSULATIONS AND SIDING CUSHION

Another **ADVANCE** Exclusive



Fixtures by
A. L. SMITH IRON CO.
CHELSEA, MASS.



FORD
ENGINEERING AND RESEARCH
CENTER AT DEARBORN, MICHIGAN

ARCHITECTS:
Voorhees, Walker, Foley and Smith
New York

ELECTRICAL CONTRACTORS:
Harlan Electric Co. • Detroit

There are three separate installations of Area Illumination in the Ford Engineering and Research Center with a combined area of more than 65,000 sq. ft. Intensities in the three areas are 112, 100 and 108 footcandles.



Designed & Engineered
BY THE
WORLD'S LARGEST MANUFACTURER
DEVOTED *Exclusively* TO THE PRODUCTION OF
FLUORESCENT LAMP BALLASTS

Advance Fluorescent Lamp Ballasts

are being used in the finest installations in America and abroad. Where outstanding quality and dependability are a must, more and more architects, electrical engineers and electrical contractors are specifying ADVANCE "Certified" fluorescent lamp ballasts. You, too, will soon recognize that ADVANCE BALLASTS give more service and are more dependable than the average in the field.

ADVANCE CO.
TRANSFORMER

Cable Address "ADTRANS"
2950 N. WESTERN AVENUE
CHICAGO 18, ILLINOIS, U.S.A.

36 MILES OF CLAY PIPE

serve New Louisville Plant

A 36-mile network of Vitrified Clay Pipe — one of the largest sewerage and drainage projects ever undertaken for a single industrial plant — has been installed at Appliance Park . . . a 942-acre site, adjacent to Louisville, Ky. This is the new plant where all General Electric Major Appliances will be manufactured. F. A. Fairbrother-George H. Miebls, Architect and Engineer; Albert Kahn Associated Architects and Engineers, Consultants, designed and engineered the job. Turner-Struck Construction Company (joint venture) is general contractor. Excavating by Eady-Codel Construction Company. Standard Engineering Company and George E. Blanford Company, plumbing.

Chemically inert Vitrified Clay Pipe is the one safe choice for underground lines exposed to corrosive industrial waste. Here, for instance, Clay Pipe is used *under the floors*, inside as well as outside the building. The vast industrial waste disposal system at this new G-E plant will handle chrome, cyanide, and acid rinse from the factory. Acid-proof Clay Pipe is completely immune to these corrosive chemicals. It can't soften, decompose, rust, rot, or squash out. It's completely safe — top and bottom, inside and out, through and through. That's why Clay Pipe is guaranteed for half a century. It never wears out!

NATIONAL CLAY PIPE MANUFACTURERS, INC.

1520 18th St. N. W., Washington 6, D. C.

206 Connally Bldg., Atlanta 3, Ga.

100 N. LaSalle St., Rm. 2100, Chicago 2, Ill.

703 Ninth & Hill Bldg., Los Angeles 15, Calif.

311 High Long Bldg., 5 E. Long St., Columbus 15, Ohio



Clay Pipe Fittings Make Installation Easy

A sewerage system doesn't have to be a patchwork of various materials. When you install Vitrified Clay Pipe, you can get all the fittings you need, Y's, T's, elbows. For example, this Vitrified Clay Cut Elbow permits turns and angles in the line that afford utmost flexibility and speed installation.



C-954-3

VISIT US AT THE
HOME BUILDERS' SHOW
(Booths 49, 50, 51, 52 — CONRAD HILTON)
CHICAGO, JAN. 16-20

Who stands behind your doors?

IF they're Mengel Doors, your worries are over. Every Mengel Door is built to meet or exceed the most rigid specifications — is *guaranteed* in accordance with the Warranty of the National Woodwork Manufacturers Association — is backed by Mengel's long years of experience and "know-how" in the manufacture of doors. *Mengel is the world's largest manufacturer of hardwood products* — including Mengel Permanized Furniture and Mengel Kitchen Cabinets.

These fine, *guaranteed* doors are available in three different types, for *every* kind of job — "Palace or Project". Each is an outstanding value, and is competitively priced. Write for complete information — AIA File No. 19-E-1.



Door Department
THE MENGEL COMPANY
Louisville 1, Kentucky

the National Library in Havana

An outstanding example of how the

**Versatility, Modern Beauty,
and Enduring Value of**

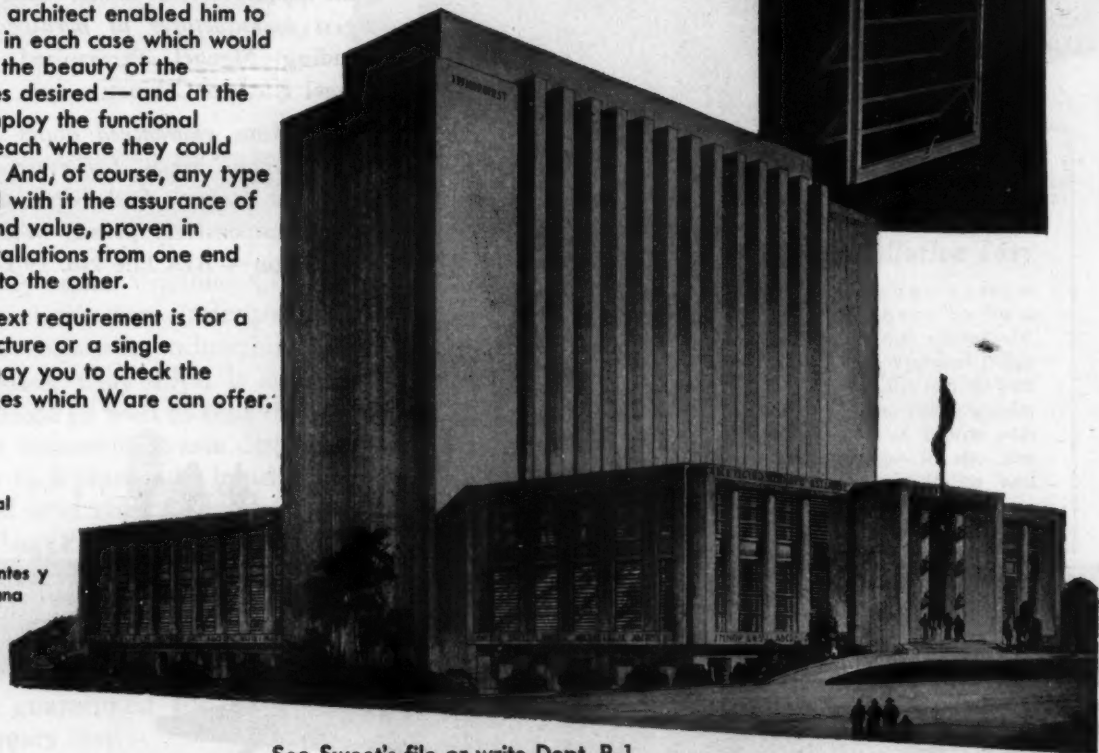
WARE
Aluminum Windows

is creating a growing preference
from Canada to the Caribbean

Three different Ware Window types were effectively employed in the stately new National Library in Havana. The broad Ware selection available to the architect enabled him to choose the type in each case which would blend best with the beauty of the architectural lines desired — and at the same time to employ the functional advantages of each where they could best be utilized. And, of course, any type he chose carried with it the assurance of Ware quality and value, proven in thousands of installations from one end of the continent to the other.

Whether your next requirement is for a monumental structure or a single residence, it'll pay you to check the many advantages which Ware can offer.

Biblioteca Nacional
José Martí
Havana, Cuba
Architect — Govantes y
Cabarrocas, Havana



See Sweet's file or write Dept. R-1

Aluminum **WARE** *Windows*



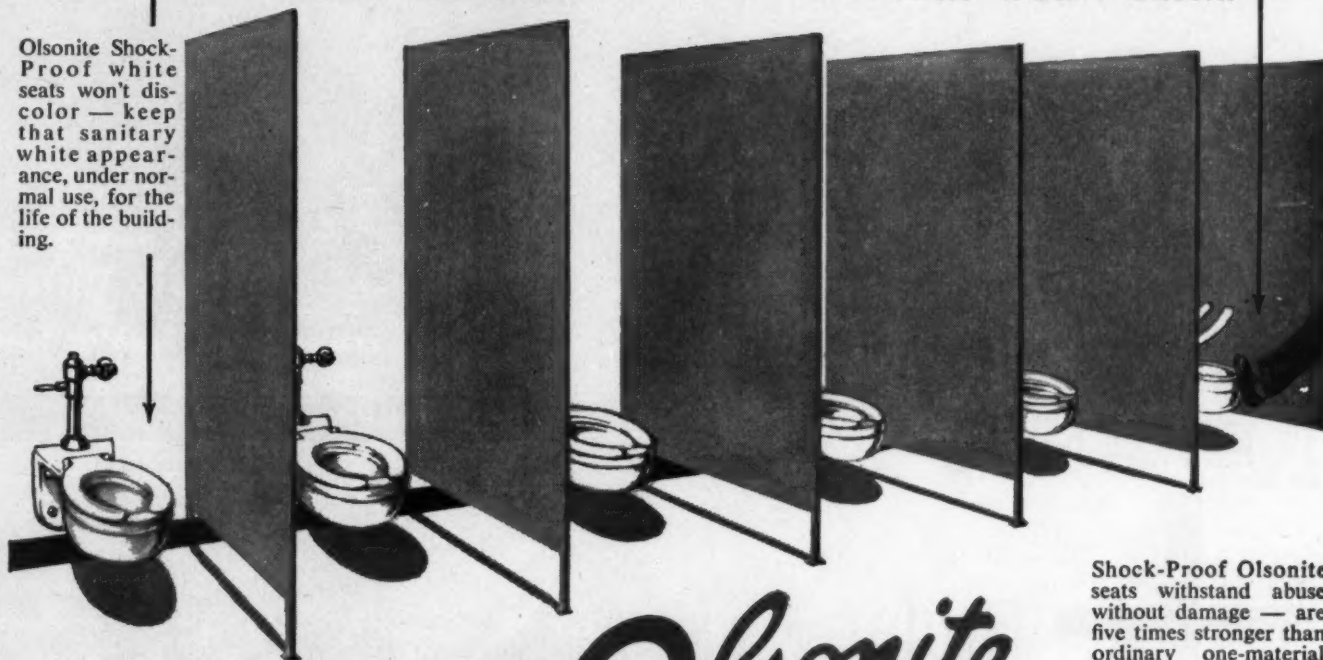
Ware Laboratories, Inc., 3700 N.W. 25th St., Miami, Florida

Now! **WHITE** Industrial **SEATS**

THAT WON'T DISCOLOR

THAT WON'T BREAK

Olsonite Shock-Proof white seats won't discolor — keep that sanitary white appearance, under normal use, for the life of the building.



SHOCK-PROOF

SOLID

Olsonite
SEATS

Shock-Proof Olsonite seats withstand abuse without damage — are five times stronger than ordinary one-material seats.

A truly white seat looks more sanitary, is more attractive, brightens and lightens the room. And now—you can specify a white seat that *stays* white for a lifetime of normal use.

The new Olsonite White Shock-Proof Seats are ideal for all industrial and public toilet installations. Independent research laboratory tests have proven no visible discoloration, even after years of service. And these tests have also proven an ability to withstand shock five times greater than ordinary solid seats. Even deliberate

abuse in public toilets and industrial installations won't crack, chip, or break the new Olsonite Shock-Proof Seats —and they won't absorb water.

Add to these new advantages the Olsonite features of concealed hinge, no exposed metal to rust or corrode; one material, sanitary white all-the-way-through; and one piece construction, no applied finish to crack or peel. Then—specify the seat that *stays* white—that can “take it” without damage even in public toilets—Solid Olsonite SHOCK-PROOF Seats.

All Olsonite Industrial, Commercial, and Public Toilet Seats are now of Shock-Proof Construction. They are available in both black and white.

Olsonite's complete catalog is available on request. Please write on your letterhead to:

SWEDISH
CRUCIBLE STEEL COMPANY

Phelps Dodge, 1561 Butler Avenue, Detroit 12, Michigan

3

winning combinations

Planned as perfectly integrated units—combined for the highest in efficient performance—these 3 matched Boiler-Burner Units represent the merged knowledge, experience and judgment of experts in both boiler and burner fields. Here, truly, are 3 of the finest Boiler-Burner Units for high or low pressure heating—power and process steam—oil, gas, or oil-gas combinations. You can be sure of dependable performance from a ...

KEWANEE



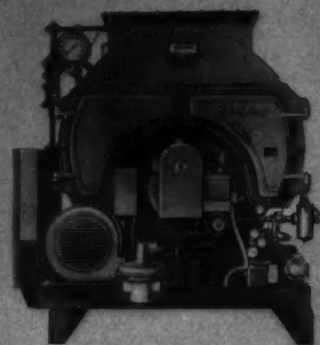
Boiler

You can be sure of lower operating cost and higher efficiency. Reserve Plus Rating certifies that 50% or more power is built in to provide for piping, pickup and additional capacity requirements. It means "cruising speed" operation with extra reserve power to take care of emergencies. It means ratings based on nominal capacity, not maximum capacity.

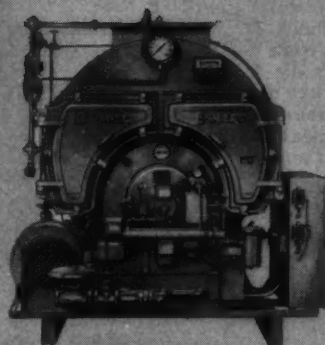
8.2

SQUARE FEET OF HEATING SURFACE PER BOILER HORSEPOWER ...
IN STRICT ACCORDANCE WITH THE
PROVED CODE OF THE STEEL BOILER INSTITUTE—80% CERTIFIED EFFICIENCY.

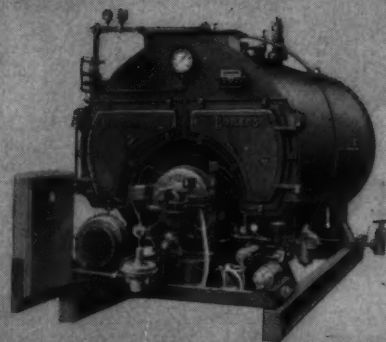
See these 3 Units in the Kewanee exhibit at the ASH&VE Exposition, Philadelphia, Pennsylvania, January 24-28, 1955.



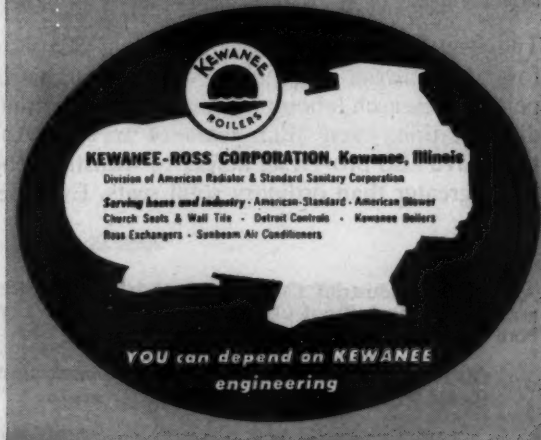
KEWANEE IRON FIREMAN BOILER-BURNER UNIT

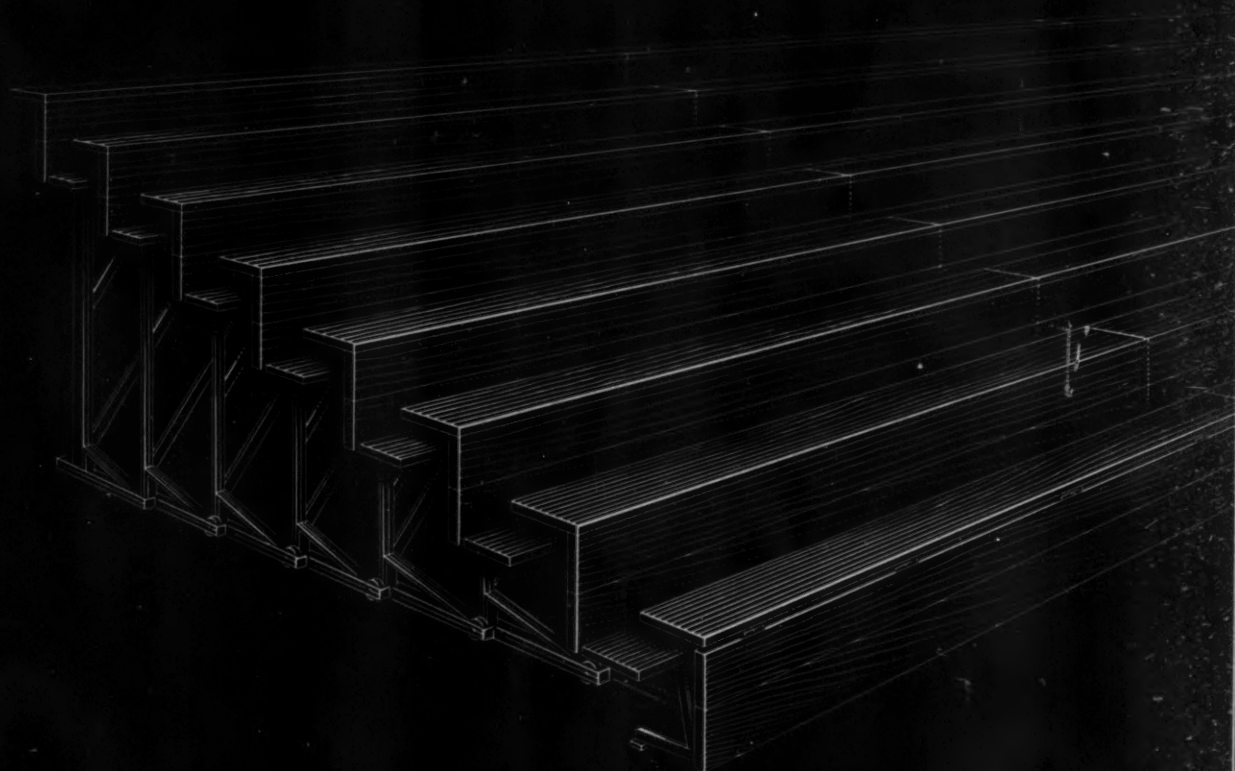


KEWANEE RAY BOILER-BURNER UNIT



KEWANEE PETRO BOILER-BURNER UNIT





FUNCTIONALLY *beautiful*
beautifully **FUNCTIONAL**

WAYNE GYMNASIUM SEATING

The idea may startle you — but *nothing* adds more to the appearance of a gymnasium than *attractive seating*! Especially Wayne Rolling Gymstands. These easy-rolling, handsome units are *architecturally designed* to bring you the utmost in lasting good looks and dependable performance.

Fine finishing gives carefully selected wood an unsurpassed mellow richness. Fully closed risers assure foot safety and better appearance. Completely vertical front when closed makes Gymstands smart and neat.

Exclusive alignment frames insure freedom from jamming, permit smooth, easy opening and closing. No sag, no sway — Wayne Gymstands meet all and exceed most grandstand safety codes and regulations. Provide maximum visibility, too.



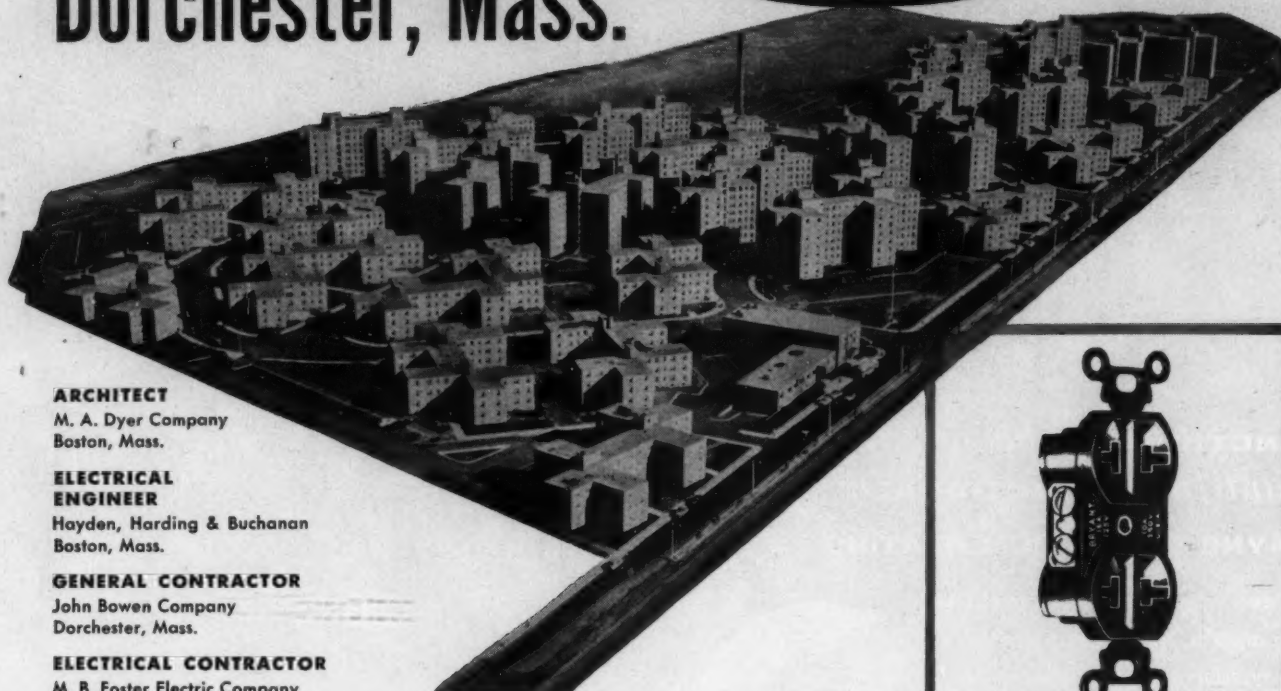
Get Wayne's Rolling
Gymstand Catalog No. R-54.
Just write on your letterhead.

WAYNE

WAYNE IRON WORKS • WAYNE, PENNSYLVANIA

At The New Columbia Housing Development Dorchester, Mass.

THE ANSWER IS
BRYANT
WIRING DEVICES



ARCHITECT

M. A. Dyer Company
Boston, Mass.

**ELECTRICAL
ENGINEER**

Hayden, Harding & Buchanan
Boston, Mass.

GENERAL CONTRACTOR

John Bowen Company
Dorchester, Mass.

ELECTRICAL CONTRACTOR

M. B. Foster Electric Company
Boston, Mass.

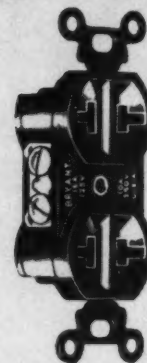
37,641 QUALITY-BUILT BRYANT DEVICES FOR 1500 UNIT DEVELOPMENT

TREMENDOUS JOB — A new landmark in Dorchester, the Columbia Housing Development will provide 1,500 modern dwelling units in keeping with today's latest architectural thinking.

WHY BRYANT WAS THE CHOICE — For over 65 years the Bryant name has been linked with quality wiring devices — and it's their quality that met the requirements of the modern design at the Columbia Development.

Devices like the rugged 4961 Switch and the 4832 double-sided contact duplex outlet, (to name two) promise years of once-installed, stay-installed electrical service.

FOR HOME, OFFICE OR INDUSTRY — Call on Bryant to meet any wiring device specification for residential, commercial or industrial installation. Quality is our hallmark.



No. 4832 Outlet
15 Amps. 125 Volts
10 Amps. 250 Volts

Listed by Underwriters'
Laboratories, Inc.



No. 4961 Switch
10 Amps. 125 Volts
5 Amps. 250 Volts

THE BRYANT ELECTRIC COMPANY

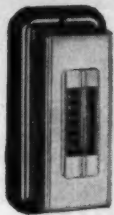
Bridgeport 2, Connecticut Chicago • Los Angeles

J-99923





another modern college building
GAINS COMFORT
SAVES FUEL
 with
JOHNSON CONTROL



Alms Building, University of Cincinnati, Cincinnati, Ohio. James E. Allen, architect and engineer; B. A. Waltherman Co., heating contractor, both of Cincinnati.

Like nearly every other building on the University of Cincinnati campus, the impressive new Alms Building, which is devoted to the fine arts, is equipped with a specially planned system of Johnson Automatic Temperature Control. A simple, but effective, control arrangement satisfies every comfort requirement of students and, simultaneously, insures maximum fuel economy.

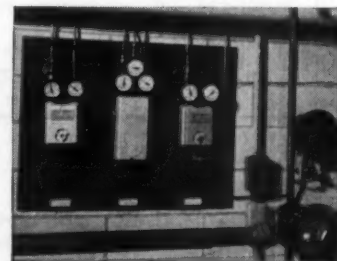
Strategically located Johnson Thermostats automatically regulate the supply of perfectly tempered outdoor air to maintain comfortable, even temperatures regardless of exposure and occupancy conditions. At the same time, a Johnson Master Thermostat prevents fuel waste by keeping the heating system in constant adjustment with the outdoor temperature.

How about your clients' buildings? Johnson brings to each job over 70 years' experience in solving every conceivable kind of temperature control problem . . . not only in colleges, but in *all* types of business, industrial and public buildings. A Johnson-engineered Con-

trol System insures the ultimate in comfort, efficiency and economy.

Johnson Control Systems are *not* limited to new buildings. They may be installed in existing buildings regardless of the type of heating and ventilating system employed. Ask an engineer from a nearby Johnson branch office for recommendations on your control problems soon. There is no obligation. **JOHNSON SERVICE COMPANY**, Milwaukee 2, Wisconsin. Direct Branch Offices in Principal Cities.

In the equipment room, panel mounted Johnson Controllers automatically regulate the heating and ventilating system to insure the lowest possible operating cost.



JOHNSON CONTROL

TEMPERATURE  AIR CONDITIONING









PLANNING • MANUFACTURING • INSTALLING • SINCE 1885

CONCLUSIVE PROOF

that correct gas venting
requires an insulated vent

PROOF OF LOWER HEAT LOSS

— only an insulated vent conserves maximum vent gas heat to assure more venting power and prevent condensation.

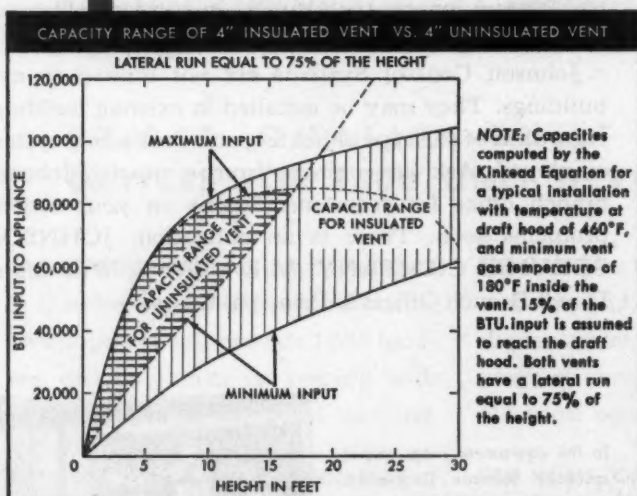
COMPARISON OF HEAT LOSS THROUGH INSULATED (METALBESTOS) AND UNINSULATED* VENT PIPE						
Distance Along Vent From Draft Hood	Type of Vent	Heat lost from vent gases (in BTU. per hour)				
		2000	4000	6000	8000	10,000
10 ft.	METALBESTOS					
	UNINSULATED VENT					
20 ft.	METALBESTOS					
	UNINSULATED VENT					
30 ft.	METALBESTOS					
	UNINSULATED VENT					
35 ft.	METALBESTOS					
	UNINSULATED VENT					

NOTE: Calculations based on 5" vent pipe with a height of 20' and a lateral run of 15'. Appliance input is 125,000 BTU. with 15,000 BTU. per hour assumed to reach the vent at the draft hood.

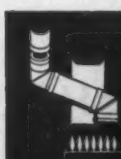
*Uninsulated vents are vents such as single-wall sheet metal, cement-asbestos and terra cotta.

PROOF OF BETTER PERFORMANCE

— only an insulated vent provides maximum venting capacity.



Be sure of safe, correct venting—
specify **METALBESTOS**—the first and leading double-wall, insulated gas vent pipe.



METALBESTOS DIVISION

WILLIAM WALLACE COMPANY • BELMONT, CALIF.

Stocked by principal jobbers in major cities. Factory warehouses in Atlanta, Dallas, Philadelphia, Des Moines, Chicago, New Orleans.



Reception Office Page Oil Tools, Inc., Long Beach, Calif.
Floor installed by Sears Bros., Inc., Long Beach, Calif.

Under-Foot Comfort

NO OTHER FLOORING

CAN GIVE!

NO FLOORING MATERIAL can duplicate the natural resilience of cork tile. Stepping across such a floor is a silent pleasure. Thousands of tiny, tough cork cells provide a quiet, comfortable cushion. Cover that cushion with rugged, wear-resistant Firestone Velon and you've got a floor that's well-nigh perfect...beautiful, long-wearing, safe and comfortable to walk on. You've got Dodge Vinyl-Cork tile!

Here's a floor that will practically sell itself in a demonstration. And when the customer discovers that soap and water (that's all!) keeps it clean, you're going to do business!

SHOW THE NEW DODGE STANDARD CORK TILE, TOO

For sheer natural beauty, the gold-and-brown tones of Dodge Standard Cork tile just can't be beat. It's ideal for both residential and commercial installations. Available in light and dark random shades.

For complete data, see *SWEET'S FILE*, Architectural ¹²ⁱDO—or write for catalog.

DODGE CORK COMPANY, INC.
Lancaster, Pa.



topped with
Firestone Velon

ONLY NEW CURTIS TROFFERS

OFFER ALL THESE
OUTSTANDING
ADVANTAGES

**NOW available with
Holophane Controlens® and
a variety of glass panels**

Holophane Lo-Brite®
Dished Crystal
Controlens®



Holophane Lo-Brite®
Flat Crystal Controlens®



Holophane Lo-Brite®
Plastic Controlens®



Corning Alba-Lite
Glass Panel



Fine Cross Ribbed
Glass Panel

- Choice of TWO or THREE Lamps per 4' or 8' section . . . rapid start, slimline or starter type.
- High levels of quality illumination.
- Shallow housing permits installation where recessing depth is as little as 6 7/8".
- Exclusive U-support yokes permit one-man installation in any type ceiling construction and cut installation time almost in half.
- Rugged construction of heavy gauge steel, finished inside and out with exclusive baked-white "Fluracite" enamel.
- Wire channel and side reflectors formed of one piece of steel with end plates riveted in position.
- Sturdy steel hinged door frame locks securely and is designed to eliminate light leaks. Hinged door frames are easily removed without the use of tools.
- Flange or Flush type construction.
- Each Troffer completely factory assembled and individually cartoned.
- Complete Illumination data available, based on Electrical Testing Laboratory Reports.
- All Curtis Troffers carry Underwriters' Laboratories Recessing Label.

Complete information on request without obligation.

NAME _____

ADDRESS _____

CITY _____

STATE _____



6135 W. 65th Street • Chicago 38, Illinois

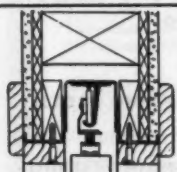
Sterling®

Pocket
Door
T-Frame

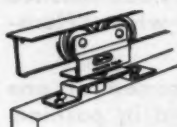
Makes Better
Passage Door
Installations



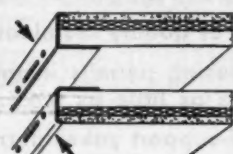
Sturdy All Steel Construction



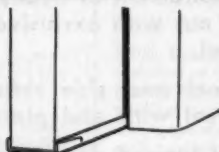
Section Through Steel
Header Showing Factory
Installed Aluminum Track



New Aluminum Track
and Adjustable Hangers
Especially Designed for
Pocket Doors

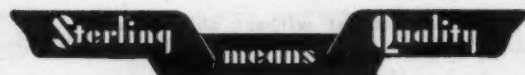


Section Through Split Jambs
Showing Heavy Gauge Steel



Aluminum Guide Strip
Attached to Bottom of Door.
Guides Door Into Pocket

Now you can build wall pockets the modern, improved way with Sterling Pocket Door T-Frame. The new Sterling T-Frame protects against warpage . . . makes pocket sturdier . . . insures trouble-free performance. Complete package includes all steel header and split jambs, track and adjustable hangers and guide strip.



STERLING HARDWARE MFG. CO.
Chicago 18, Illinois

SEE OUR CATALOG IN SWEET'S:
Architectural File • Light Construction File

VISIT OUR DISPLAYS: Architects Samples Corporation, N.Y.C.
Chicagoland Home Building Center, 130 W. Randolph St.

take a
good look at DOUGLAS FIR



Architect, Rand-Marquis

one of 10 woods from the
WESTERN PINE region

Rugged strength, straightness, durability, high nail-holding ability—those are the traits that make Douglas Fir one of the finest structural woods. And you will find this handsomely grained, distinctly colored wood economical to specify for all residential use from framing and siding to flooring and paneling.

Douglas Fir comes in 3 select, 5 common, 3 structural, 4 dimension, 4 factory grades. Your local lumber dealer has it on hand—or can get it for you quickly!

the Western Pines

IDAHO WHITE PINE
PONDEROSA PINE
SUGAR PINE

the Associated Woods

DOUGLAS FIR
LARCH
WHITE FIR
ENGELMANN SPRUCE
INCENSE CEDAR
RED CEDAR
LODGEPOLE PINE



"D. FIR" is a Registered Trademark
of the Western Pine Association

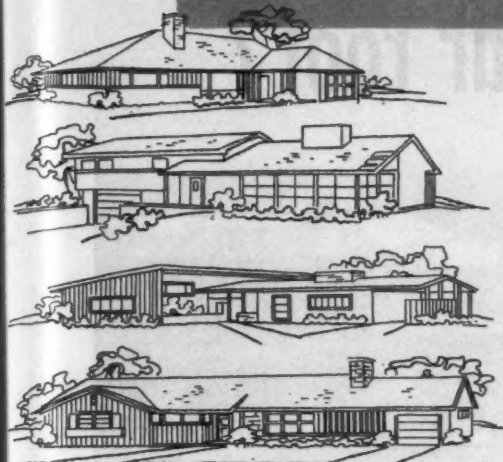
get the facts on DOUGLAS FIR
write for the FREE illustrated booklet to
WESTERN PINE ASSOCIATION, Dept. 316-U,
Yeon Bldg., Portland 4, Oregon



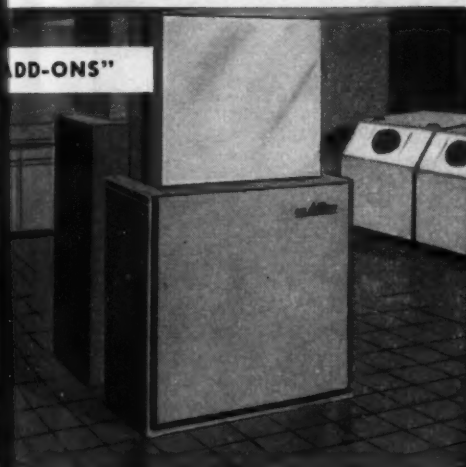
residential air conditioners

...tailored to builders' needs!

Now usAIRco offers you a complete line of residential conditioners . . . designed with the builder in mind . . . to give your homes extra sales appeal! usAIRco home air conditioners are flexible, adapted to every type of installation, and are quickly and easily installed! usAIRco air conditioners provide more cooling load per horsepower and are compact in size to conserve space. The finest engineering features in the industry go into every home unit . . . assure trouble-free operation for years to come. That's why every unit carries a 5-year warranty. It will pay you to get the full story on home air conditioners, including the realistic usAIRco price picture.



"ADD-ONS"



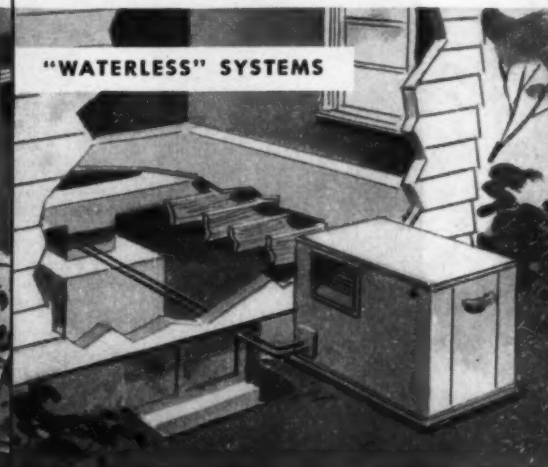
Home-aire For home "add-on" installations, the usAIRco "packaged" air conditioner is quickly and easily connected to any warm air furnace. Only two simple duct connections are required: at the top and back of the existing furnace. The usAIRco Home-aire cooling unit utilizes ductwork, blower and filters of the existing warm air heating system.

"COMBINATIONS"



Year 'round The usAIRco year 'round combination unit cools, heats, filters, dehumidifies, and circulates conditioned air. Consisting of a warm air furnace and matching air conditioning unit, this compact combination requires little more space than the average furnace. It can be installed anywhere . . . basement, closet or utility room. Same ducts distribute both warm and cool air.

"WATERLESS" SYSTEMS



Kooler-aire Operates on electricity only! Air cooled condensing unit, consisting of sealed compressor, condenser coil, blower and receiver, can be located in or out-of-doors. Unit is used in conjunction with housed cooling coil, which may be installed anywhere in outlet side of air supply system. A blower and coil section is available where required.

For more than 30 years the United States Air Conditioning Corporation has pioneered developments in air conditioning commercial and industrial buildings. As a result of this fruitful period of accumulated knowledge, skill and experience, usAIRco has developed air conditioning equipment unsurpassed in engineering quality and efficient performance.

UNITED STATES AIR CONDITIONING CORPORATION

MINNEAPOLIS 14, MINNESOTA Export: 13 E. 40th St., New York 16, N.Y., U.S.A.



See our complete line in
BOOTH 377
NAHB Show January 17-21
Chicago, Illinois

Who's that man on your roof?

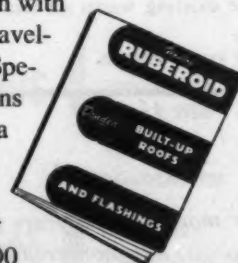


Did you *specify* the *roofer* as well as the roof, application methods and materials? The right roofer is as important as the right roof.

If he's a Ruberoid Approved Roofer you can be sure of getting the experience and "know-how" that means uniform quality of application and the avoidance of costly headaches.

You can count on your Ruberoid Approved Roofer for sound advice, too . . . not only because of his experience . . . but because Ruberoid makes every type of built-up roof in specifications to meet every need. Ruberoid Approved Roofers are not prejudiced in favor of any one type.

The Ruberoid Built-Up Roofing Specification Book is handy, useful reference for the selection of any type of roof . . . large or small . . . smooth-surfaced asbestos, coal tar pitch with gravel or slag surfacing, or gravel-and-slag surfaced Ruberoid Special Bitumen. It also contains practical working details for a wide variety of flashing and eave construction. If you don't have a copy, write for one to The Ruberoid Co., 500 Fifth Ave., New York 36, N. Y.



The RUBEROID Co.

ASPHALT AND ASBESTOS BUILDING MATERIALS

COLLEGE BUILDINGS

THE SPATE OF STUDENTS that has been flooding our elementary and secondary schools has already begun to affect our institutions of higher education. The U. S. Office of Education has released current statistics: 2,472,000 students (total) in the fall of 1954 — nearly 1 per cent more than the previous all-time high, 2,457,000 in 1949, when the G. I. educational program's influence reached its peak; 11 per cent more new students last fall than in 1953, more than any previous year except 1946 when new G. I. enrollees were at a maximum. What we are now experiencing is the normal result of population growth in a period of economic well-being.

Those are the present facts. Possibly the most reliable future estimate is made by Ronald B. Thompson, Registrar of Ohio State University, in the August, 1954 issue of *College and University Business*: "It is now generally accepted among those in higher education that college and university enrollments will approximately double in the next 15 or 16 years." The National Association of Manufacturers, quoting the Council for Financial Aid to Education, estimates enrollments for 1965 at 4,000,000; for 1975, at 5,000,000.

Against these statistics are arrayed some facts that cause serious concern: low salaries and shortages of faculty personnel; dwindling revenue, particularly among our historically dominant private institutions whose endowments have shrunk; co-existing obsolescence of many facilities and imperative demand for more and new types of space. In the following pages is a brief report of the building programs several institutions have set up to cope with their individual situations (and, lest we think the phenomenon peculiarly American, one from abroad); and a sampling of the results of the Housing and Home Finance Agency's College Housing Program, an ably administered, highly successful example of Federal aid.

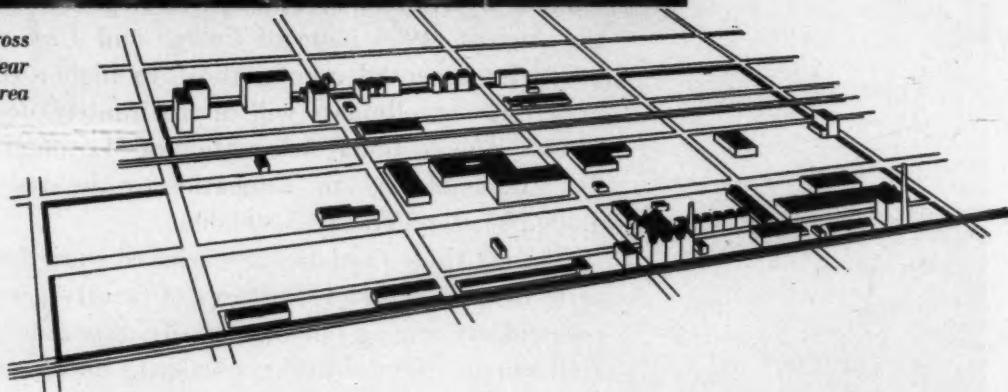
Old and new together, Illinois Institute of Technology; Ludwig Mies van der Rohe, Architect



Joseph L. Lucas, Jr.



Technology Center, IIT campus; cross is site once proposed for nuclear reactor, now relocated in center of area



ILLINOIS INSTITUTE OF TECHNOLOGY, CHICAGO, ILL.

DR. JOHN T. RETTALIATA, President of Illinois Tech, pointed out in the course of an address last June that Chicago's mid-America location, in addition to making it the world's greatest industrial city, had in the past enabled it to lead the country architecturally; he suggested that the city's vitality as well as its situation could attract talent and patrons of all the industrial arts. Illinois Tech's newly developed 110-acre campus in Chicago's industrial south side thus has a positive goal and a continuing philosophy. The view of IIT's residential area (right) shows several apartment buildings for students and faculty. Reading clockwise they are: Carman Hall (completed 1953); Bailey and Cunningham (under construction); Gunsaulus Hall.



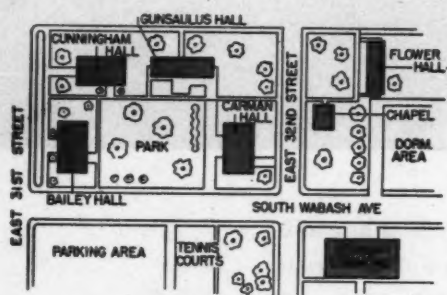
RESIDENCE HALLS

**Ludwig Mies van der Rohe,
Architect**

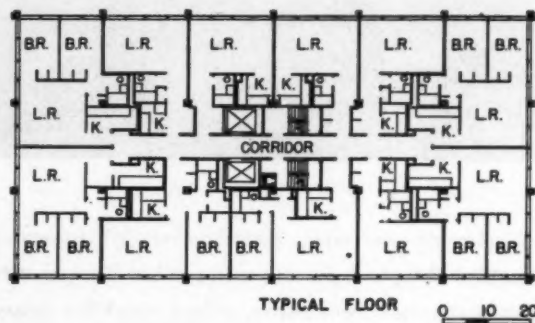
**Pace Associates,
Associated Architects**



Carman Hall, recently completed student-staff apartment building



Plot plan shows residential campus; right, part typical plan, Cunningham and Bailey Halls; layouts vary slightly. Cunningham will have 6, 5 and 2-room units (total, 56), Bailey, 4, 3 and 2-room units (total, 88), for married students and staff



TYPICAL FLOOR 0 10 20

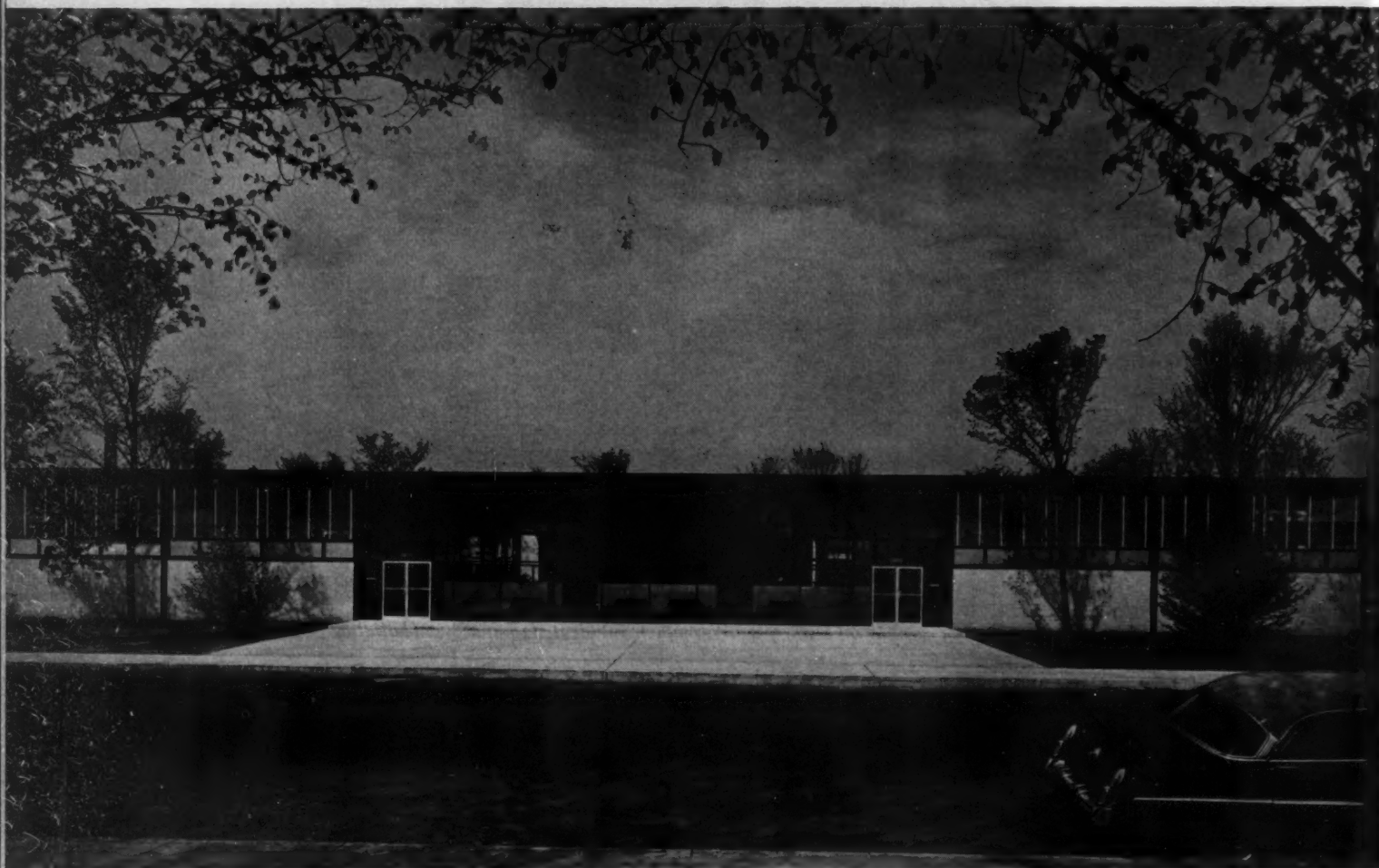
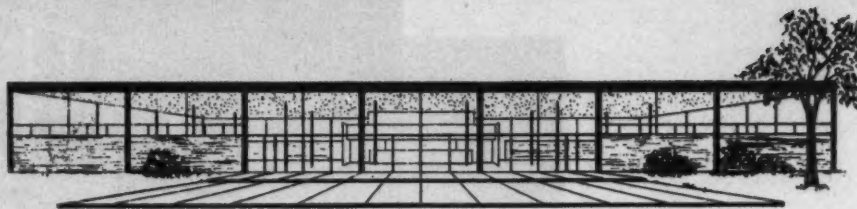
Lobby, Carman Hall



Typical apartment, Carman Hall

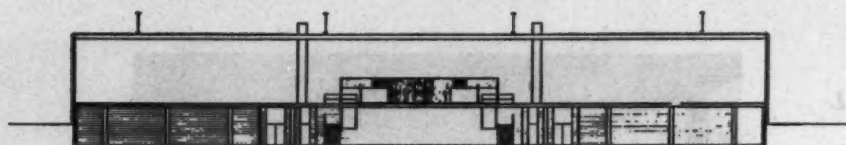


COMMONS BUILDING

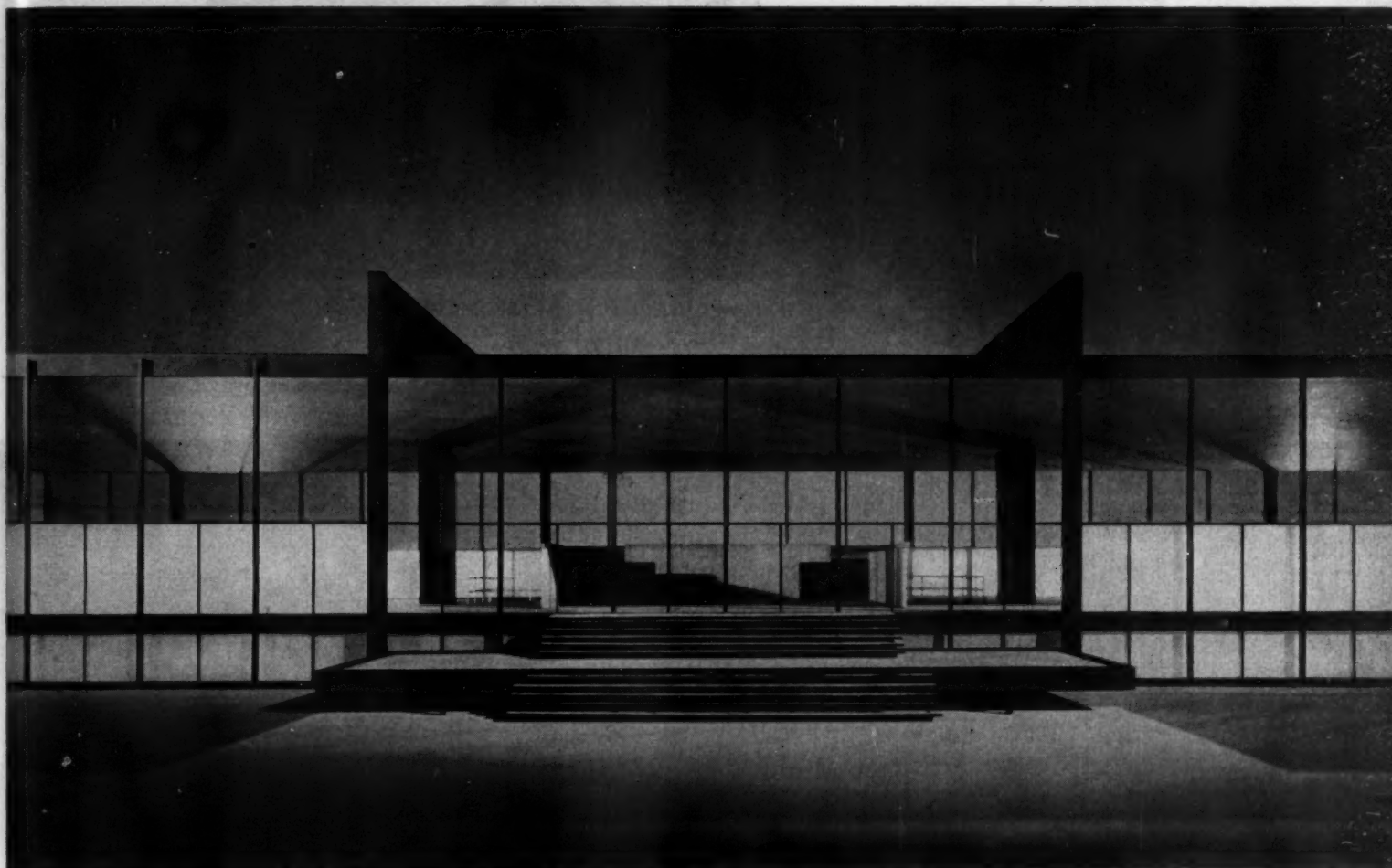


Hedrich-Blessing

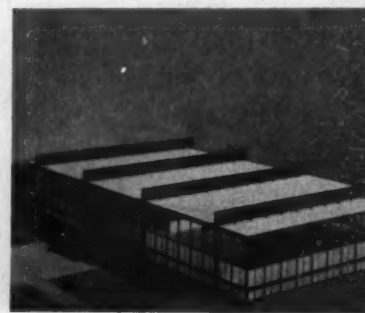
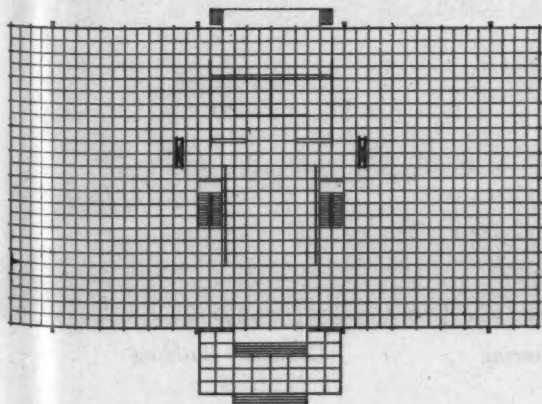
Above, front view, and left, student dining room, new Illinois Tech Commons Building. All of Tech's new buildings are designed by Mies van der Rohe. Commons serves both as dining room for resident students and as shopping center for faculty and staff members living in campus apartment buildings. Upper half of all exterior and interior walls is clear glass. Building was completed in the Spring of 1954. In the basement are a recreation lounge and bowling alleys.



**SCHOOL OF
ARCHITECTURE, DESIGN,
AND CITY PLANNING**



This will be the twentieth modern building on Tech's campus. Of steel and glass (lower sections opaque), it will contain a large, column-free main hall; its concrete roof will be hung from four exposed girders. Main floor, 120 by 220 ft, will have two drafting rooms. Basement will house studios, lecture rooms, other facilities



COLLEGE BUILDINGS: ILLINOIS INSTITUTE OF TECHNOLOGY

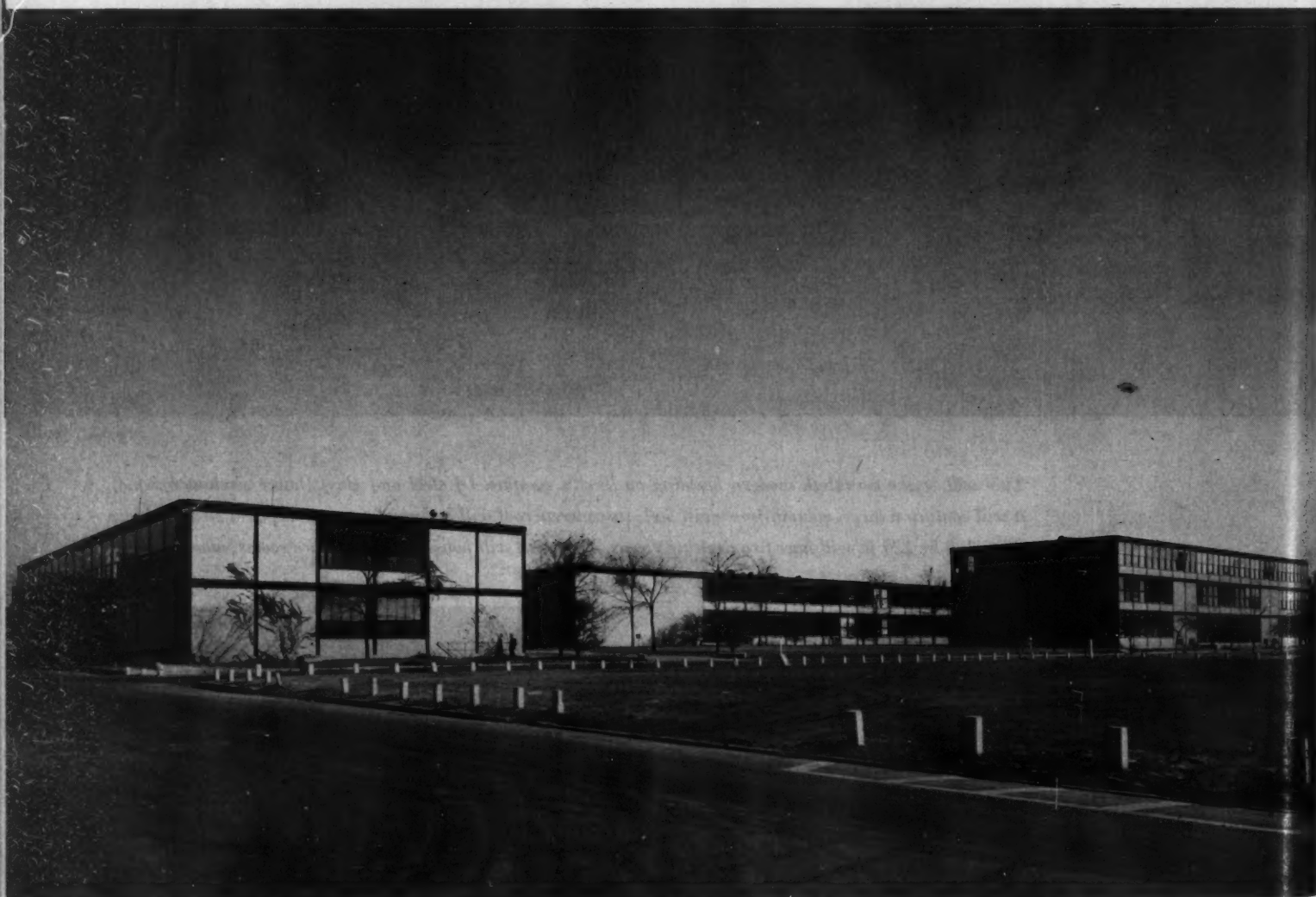
**CLASSROOM BUILDINGS:
ALUMNI HALL; METALLURGICAL
AND CHEMICAL ENGINEERING;
CHEMISTRY BUILDING**



Joseph J. Lucat, Jr.

Foyer, Metallurgical and Chemical Engineering

Hedrich-Blessing



Alumni Hall

Metallurgical and Chemical Engineering

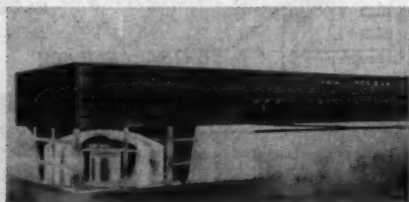
Chemistry Building



Joseph J. Lucas, Jr.

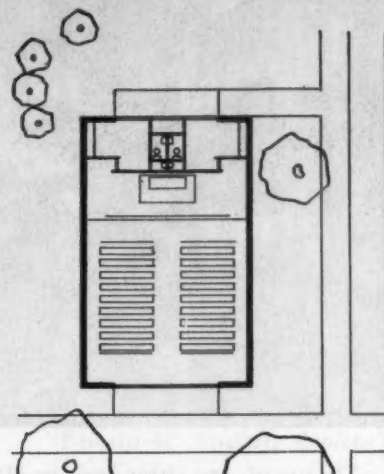
Chemistry, and Metallurgical and Chemical Engineering

Like most of the country's colleges and universities, Illinois Institute of Technology is crowded. Until the new Architecture, Design and City Planning Building (see preceding page) is built, architecture classes are being taught in Alumni Hall. The crowding is a symptom, not of an ailment but of fundamental soundness which has attracted unprecedented numbers of students. Starting in 1940 with a few old buildings and seven acres of land, Illinois Tech embarked on its bold program under Mies van der Rohe's architectural guidance. Carman Hall (preceding pages) was the fifteenth new building on the campus; Commons, the sixteenth; more are needed. Architecture and Design, Liberal Arts, the Student Union, Library and Administration, more engineering buildings, gymnasium, swimming pool and field house, and research facilities for IIT's affiliates, all remain to be built.

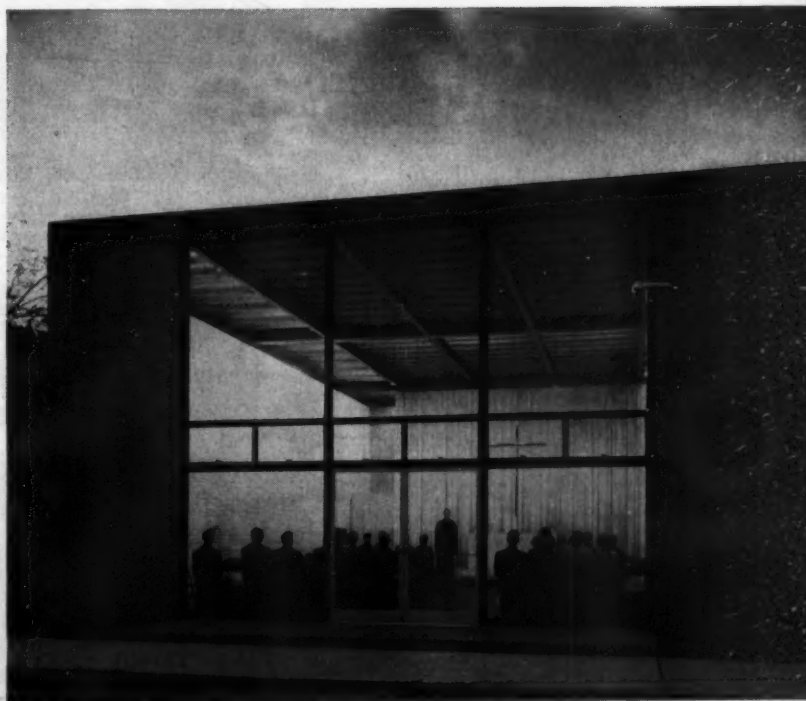


Sketch above is one conception of the Armour Research Foundation Nuclear Reactor to be housed below ground in a new building

ST. SAVIOUR'S CHAPEL



Hedrich-Blessing

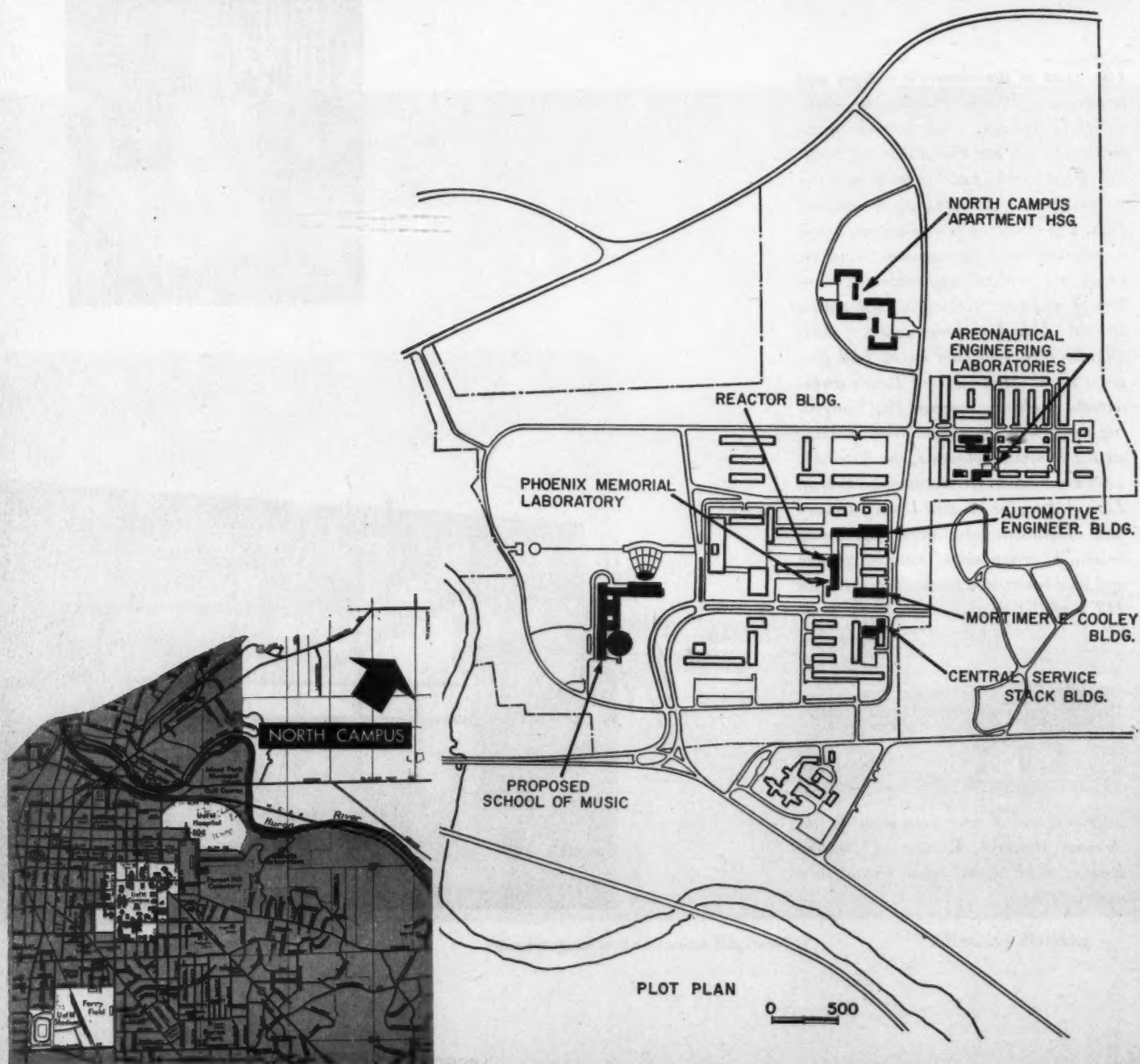


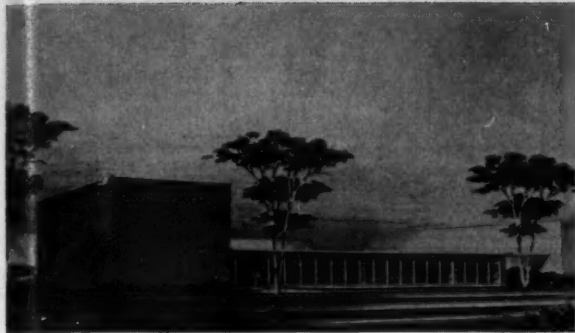
Hedrich-Blessing



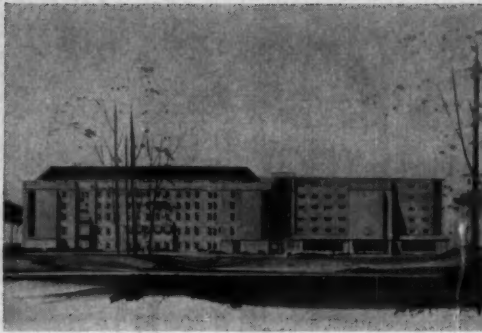
The city of Ann Arbor hems in Michigan's main campus, necessitating development of new North Campus laid out by Eero Saarinen and Associates (model above, plan below)

THE UNIVERSITY OF MICHIGAN

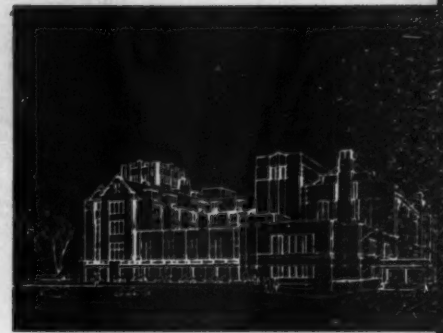




CENTRAL SERVICE AND STACK BLDG.
Albert Kahn Assoc. Archts. and Engrs.



ADDITION, COUZENS HALL
Ralph R. Calder, Archt.



ADDITION, MICHIGAN UNION
Eberle M. Smith, Archts. & Engrs.

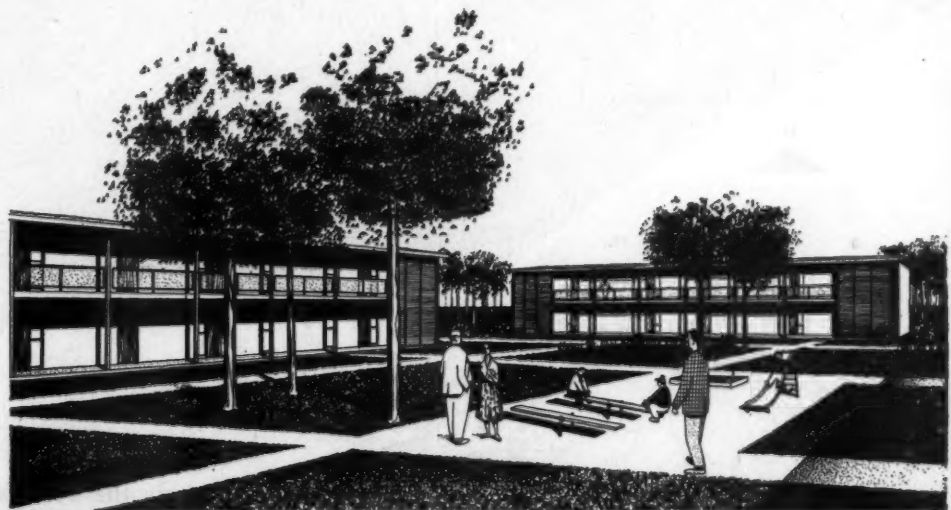
OUTGROWS ITS CAMPUS, ANN ARBOR, MICHIGAN

THE UNIVERSITY OF MICHIGAN has a long-range development program designed to meet present and future needs. Appropriations are expected from the 1955 session of the State Legislature for construction immediately required and to make a significant start on the 5-year expansion program, which involves new construction, remodelling and additions with work

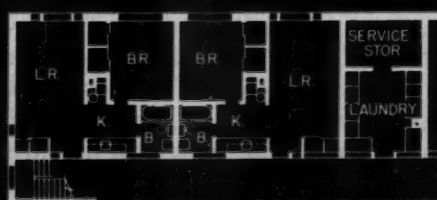
scheduled on a year-by-year basis. In presenting its request the Michigan Board of Regents states: "It is urged that adequate appropriations be made. . . . The period of expanding enrollment is already at hand. . . . Action is imperative if the growing number of Michigan's young men and women are to receive the college training and later, the professional training they

NORTH CAMPUS APARTMENT HOUSING

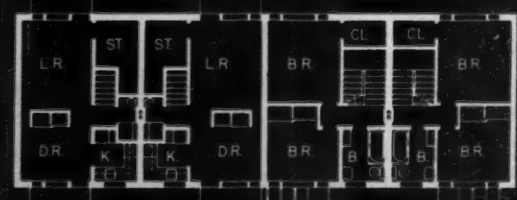
*Leinweber, Yamasaki
& Hellmuth, Architects*



FIRST FLOOR 0 BEDROOM UNITS



FIRST FLOOR 1 BEDROOM UNITS

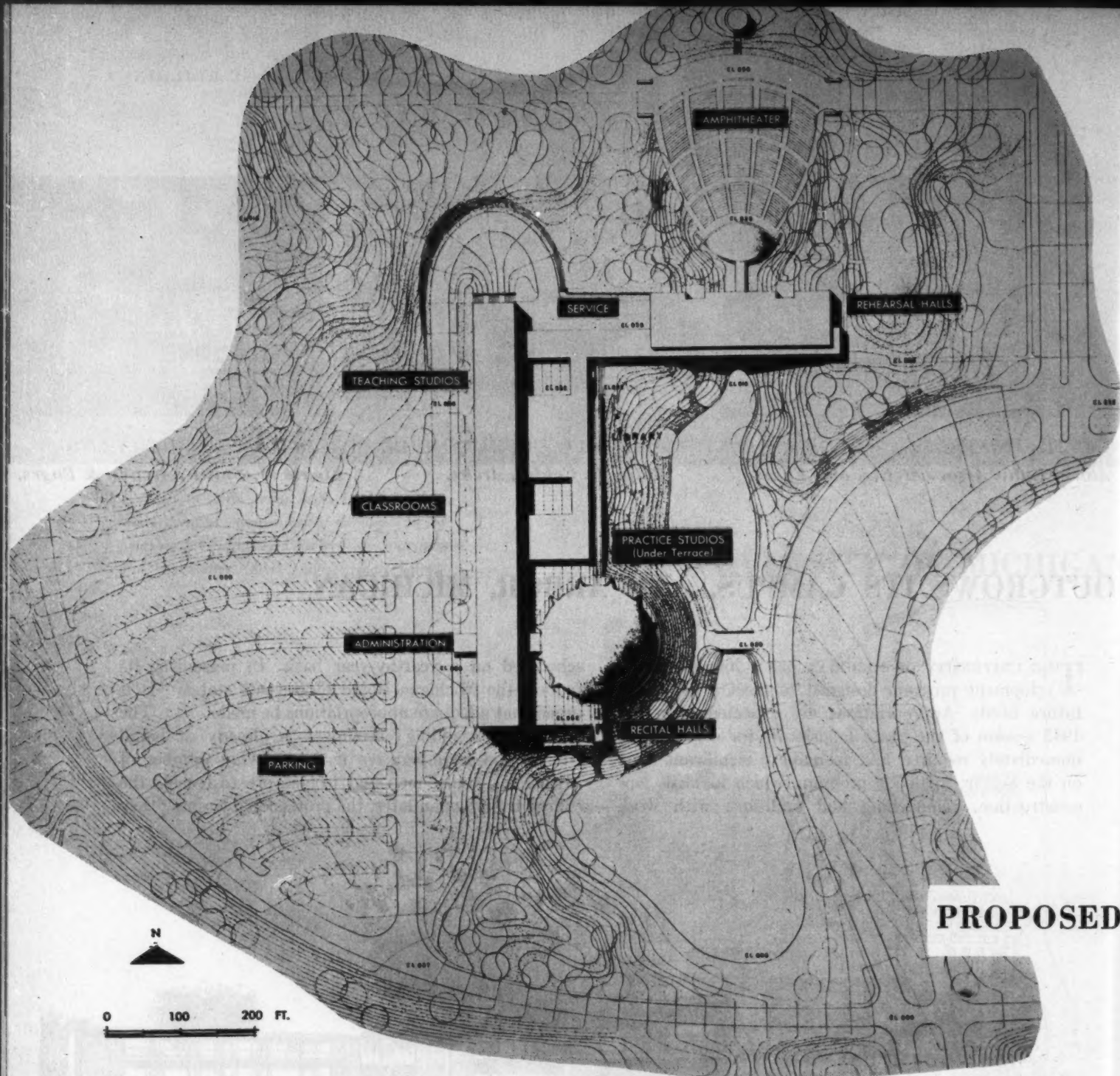


FIRST FLOOR SECOND FLOOR

Typical apartments: 0 bedrooms

One bedroom

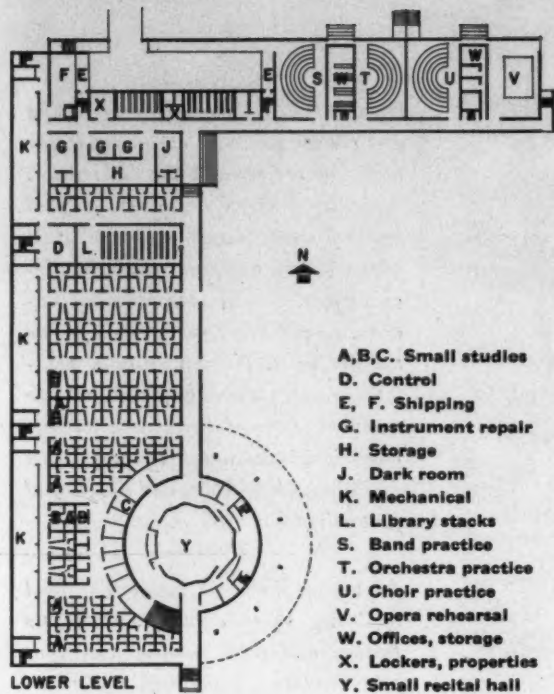
Two bedrooms



must have if we are to achieve continued improvement in the welfare and standard of living of all citizens." The University is asking \$9,061,000 for new construction, \$2,320,000 for remodeling and additions in 1955, \$704,000 for planning funds.

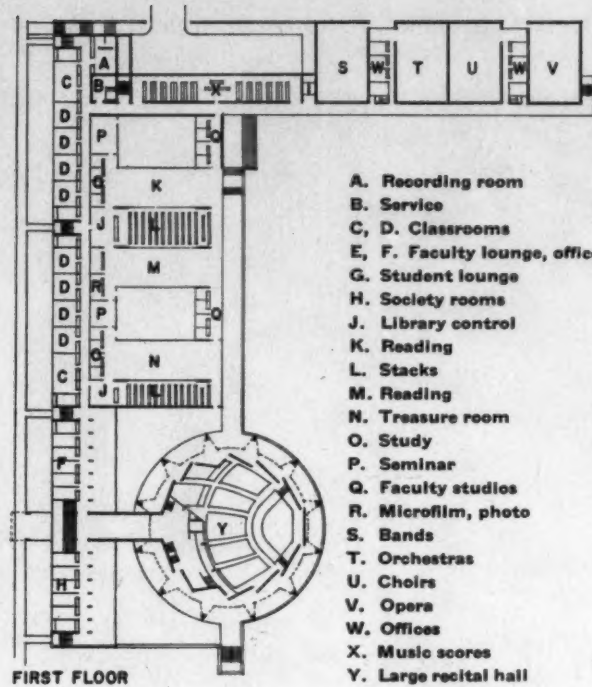
Unlike some other institutions of higher learning, the University of Michigan is employing many different architectural and engineering firms to develop the individual buildings which are fulfilling its master plan. As of June 1954 there were some seventy building projects, on the Main and North Campuses and at the Medical Center, in different stages of progress. These were designed by some 28 firms of architects and engineers, individually and in various combinations. Obvi-

ously the work of only a few can be shown here; the entire list of designers reads like a roster of the Michigan Society of Architects, with some out-of-state firms for good measure and some of the normal alteration, addition and engineering work handled by the University's Plant Department or Supervising Architect's Office. Lynn W. Fry, Supervising Architect, has charge of developing building programs, of correlating the work of individual architects, and of supervising construction. One instance of this cooperative procedure is the proposed School of Music, shown on these pages. Its thin-shell concrete dome will house two recital halls, one of 400, the other of 1200 seats. Both will have suspended acoustical ceilings.



- A, B, C. Small studios
- D. Control
- E, F. Shipping
- G. Instrument repair
- H. Storage
- J. Dark room
- K. Mechanical
- L. Library stacks
- S. Band practice
- T. Orchestra practice
- U. Choir practice
- V. Opera rehearsal
- W. Offices, storage
- X. Lockers, properties
- Y. Small recital hall

0 100FT.



- A. Recording room
- B. Service
- C, D. Classrooms
- E, F. Faculty lounge, offices
- G. Student lounge
- H. Society rooms
- J. Library control
- K. Reading
- L. Stacks
- M. Reading
- N. Treasure room
- O. Study
- P. Seminar
- Q. Faculty studios
- R. Microfilm, photo
- S. Bands
- T. Orchestras
- U. Choirs
- V. Opera
- W. Offices
- X. Music scores
- Y. Large recital hall

Second floor, above classroom wing, contains administrative offices; third floor, classrooms, large and small studios, and faculty offices

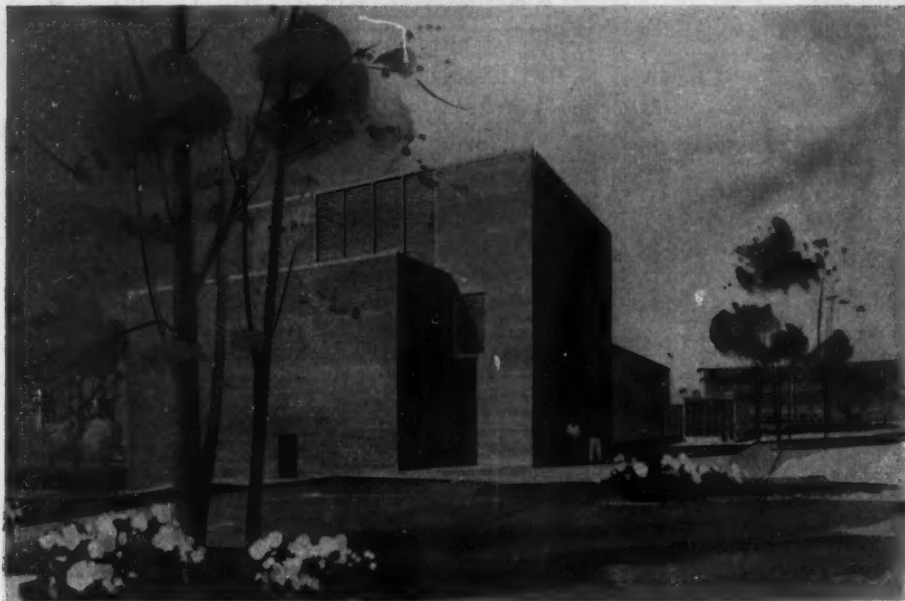
SCHOOL OF MUSIC

Eero Saarinen and Associates, Architects



PHOENIX PROJECT (PROPOSED NUCLEAR REACTOR)

Giffels & Vallet, Inc., L. Rossetti, Archts. & Engrs.

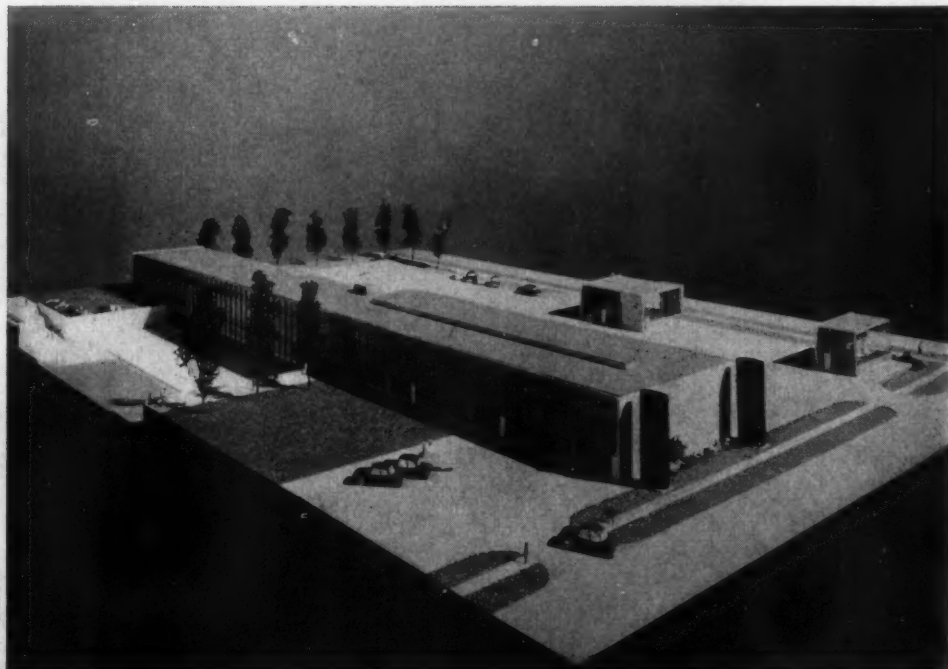


On the North Campus, this building and reactor pool will house a relatively high-powered research thermal reactor. It is windowless, gas-tight; its pool has 6-ft-thick "heavy" concrete walls whose barytes aggregate yields 50 per cent greater density than ordinary concrete. Upper floors carry loads of one ton per sq ft. Normal heating, ventilating and plumbing facilities were modified to meet requirements for safe operation, including protection against radiation, air leakage, and disposal of contaminated wastes

Photos of Women's Swimming Pool building show exterior, student's lounge, and pool. Ground floor contains lockers, mechanical equipment

**AUTOMOTIVE
ENGINEERING BUILDING**

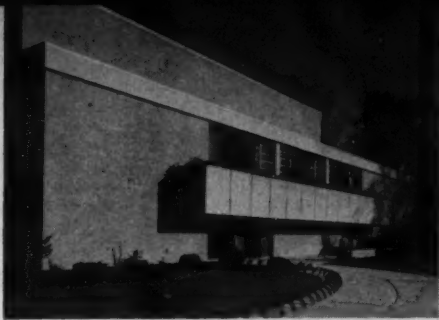
*Giffels & Vallet, Inc.,
L. Rossetti, Archts. & Engrs.*



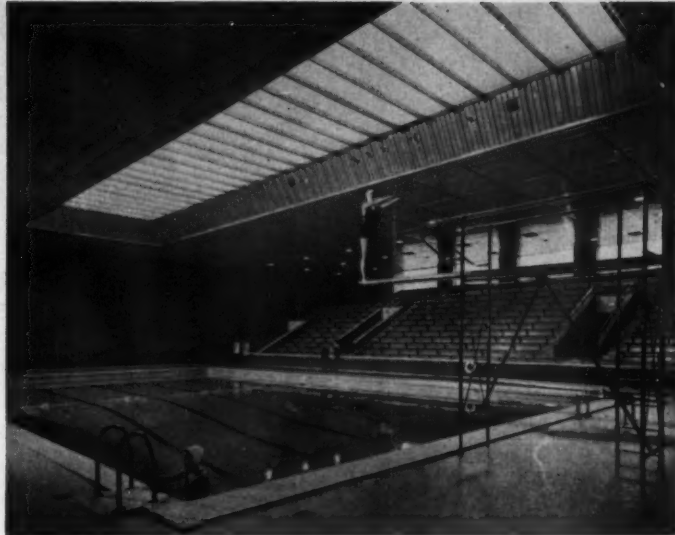
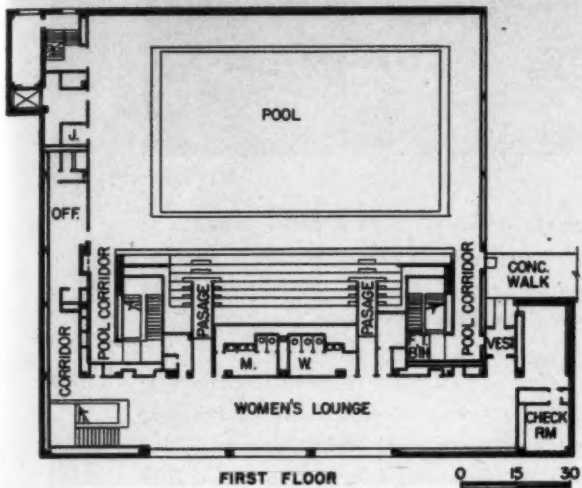
Lens-Art



Construction has started on the Automotive Engineering Building; photographs show the model. Exhaust stacks indicate position of dynamometer rooms. In the building will be testing laboratories for research, classrooms, faculty offices



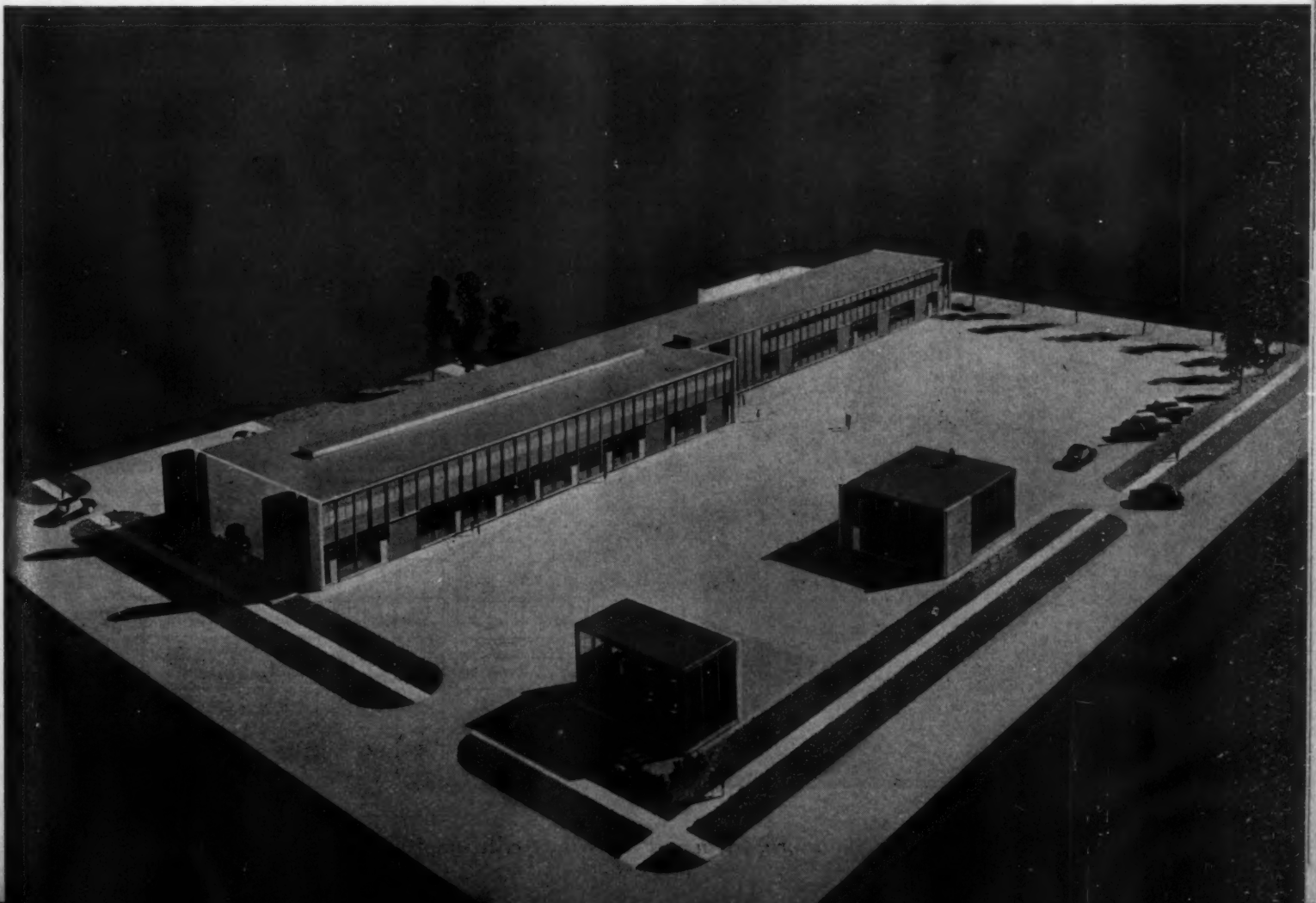
Hedrich-Blessing

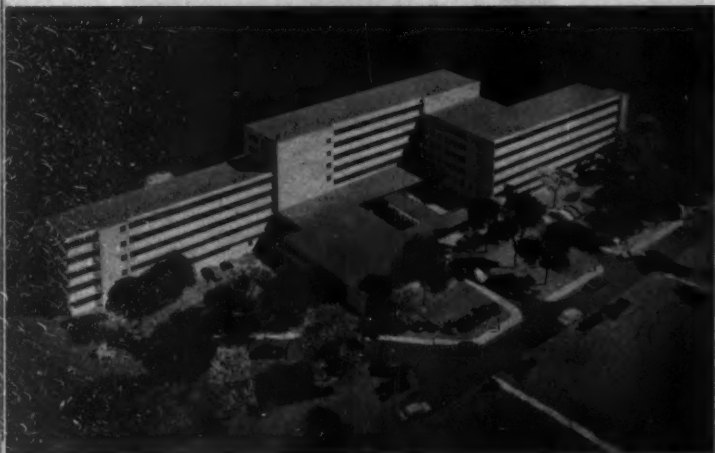


WOMEN'S SWIMMING POOL

Lee Black & Kenneth C. Black and Alden B. Dow, Architects

Lens-Art





CHILDREN'S HOSPITAL; PSYCHIATRIC UNIT
Swanson Associates, Inc., Architects

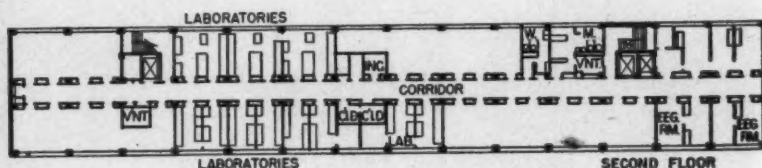


The University of Michigan medical center contains a number of existing buildings as well as several under construction or contemplated. The group (model photo above) is situated between the Main and North Campuses

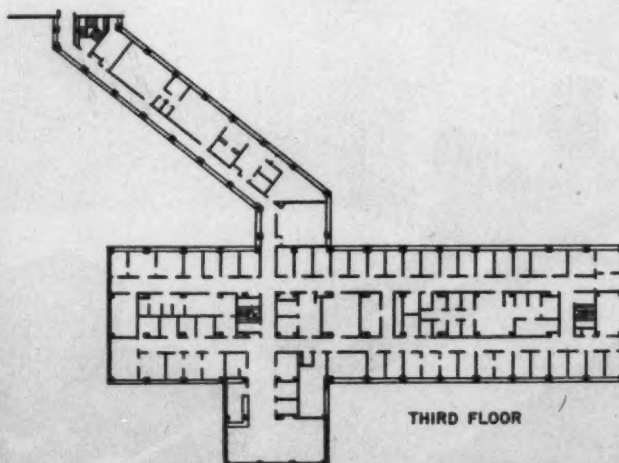


KRESGE MEDICAL RESEARCH BUILDING
Giffels & Vallet, Inc., L. Rossetti; Skidmore, Owings & Merrill, Architects

The Psychiatric Unit of Children's Hospital is a complete hospital in itself. The Kresge Medical Research Building has a basement containing mechanical equipment and shops, four floors of offices and laboratories, and a fifth floor enclosed in an almost solid wall containing more mechanical equipment. The Outpatient Clinic, with an interior service-core scheme, has seven floors housing the following departments in addition to those indicated on the third-floor plan: heredity, pediatrics, pharmacy, dermatology, gynecology, orthopedics, surgery, urology, neurology, otolaryngology, ophthalmology, endocrinology and metabolism, dietetics, thoracic surgery, psychiatry



OUTPATIENT CLINIC
Giffels & Vallet, Inc., L. Rossetti; Skidmore, Owings & Merrill, Architects





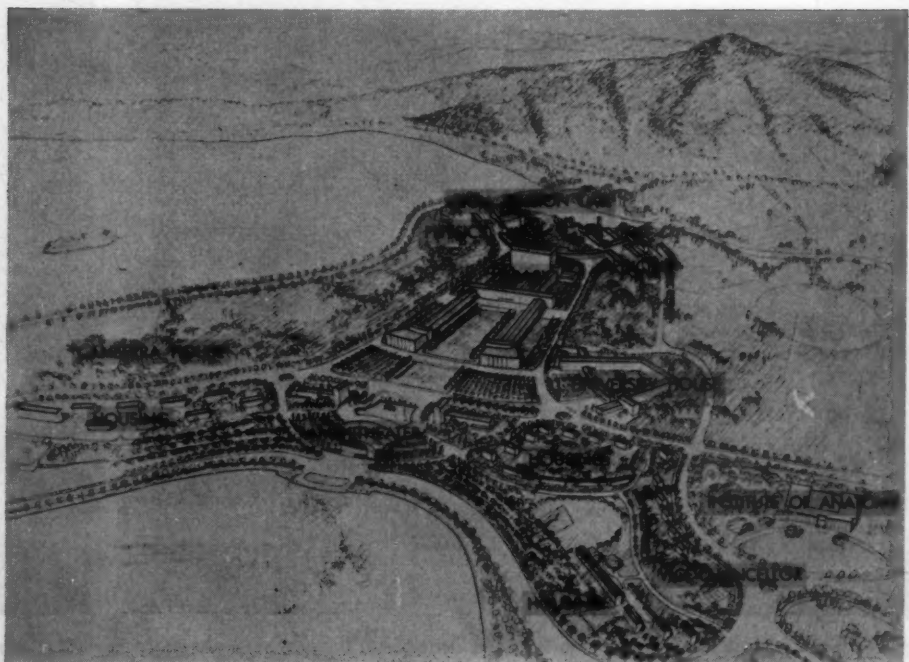
Ritter-Jeppesen Studios

THE AUSTRALIAN NATIONAL UNIVERSITY

CANBERRA, AUSTRALIA

Prof. Brian B. Lewis, Consulting Architect

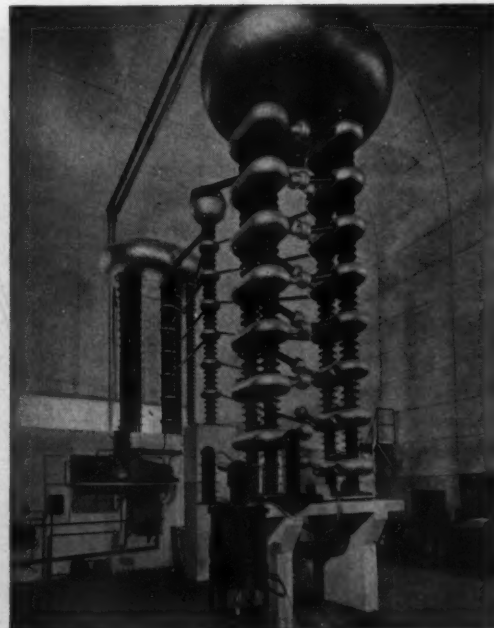
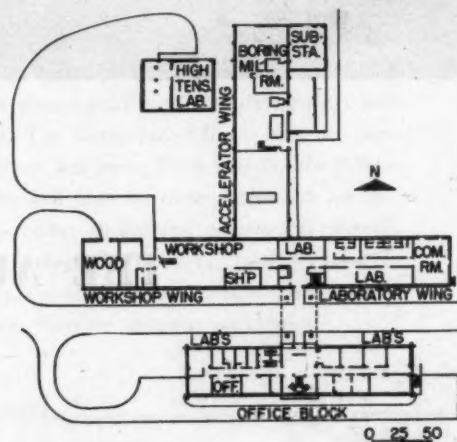
In 1911 an international competition for the plan of Canberra, Australian federal capital, was won by American architect Walter B. Griffin of Chicago. The area then reserved for a university, although modified by unfortunate early changes, is now occupied by the Australian National University. Established since World War II, it is a post-graduate school devoted principally to non-clinical medicine, nuclear physics, Pacific studies and social sciences. The 200-acre site, mostly low and undulating, has a marked ridge, one determinant of Griffin's plan, on which the central University buildings are now being placed





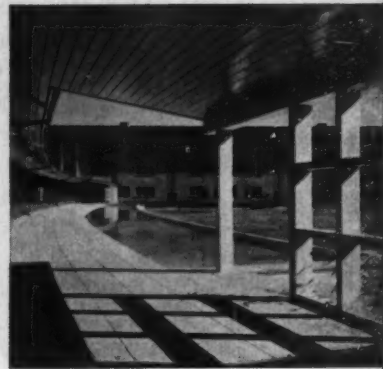
Top photo: Physics School (plan at right); administrative unit in foreground; vertical supports 5 ft o.c., U-shaped in plan, carry vertical services to small labs facing south away from sun. Center, Physics Workshop, built during steel shortage; bottom, Medical School Workshop, steel framed, first of several medical units

The building program at Australian National University includes an Institute of Physical Research, now completed and occupied; Institute of Medical Research (workshops completed, main building started); Departments of Social Studies and Pacific Studies (nothing built; these occupy existing temporary structures); University House, social and residence center (completed); Library (not started); Housing (five buildings completed); workshops and storage buildings (one complete). Professor Brian Lewis of the University of Melbourne was retained to develop the site plan and design most of the buildings. Architects Mussen & Mackay of Melbourne designed the Medical Research group.

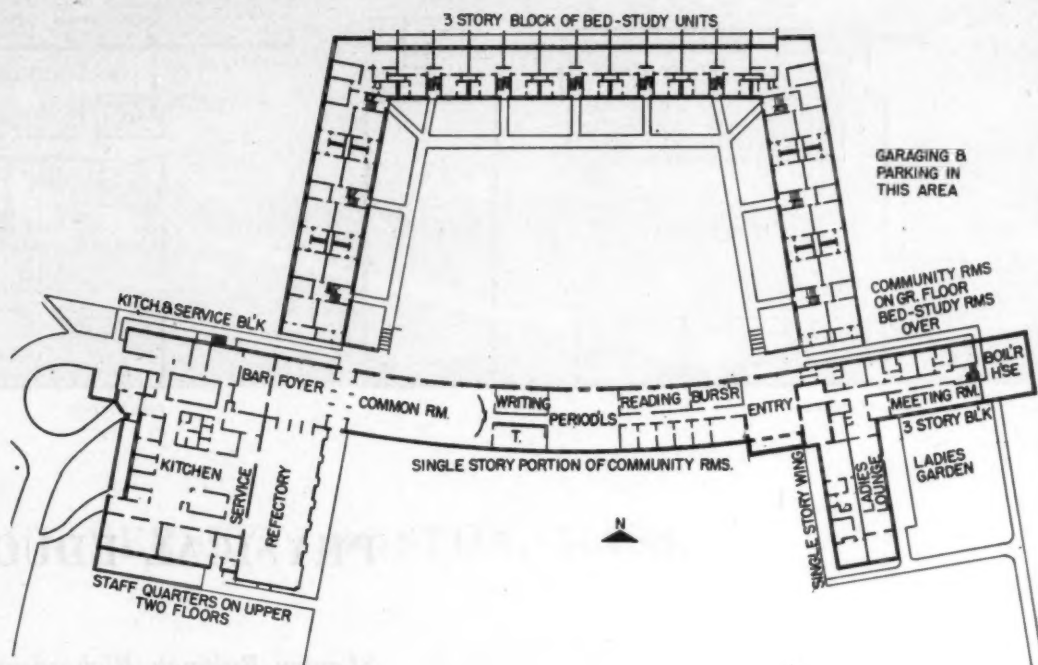


Physics School Workshop (left), upper level; walls are 3-in. insulation blocks against asbestos cement sheets; right, High Tension Laboratory

COLLEGE BUILDINGS; AUSTRALIAN NATIONAL UNIVERSITY



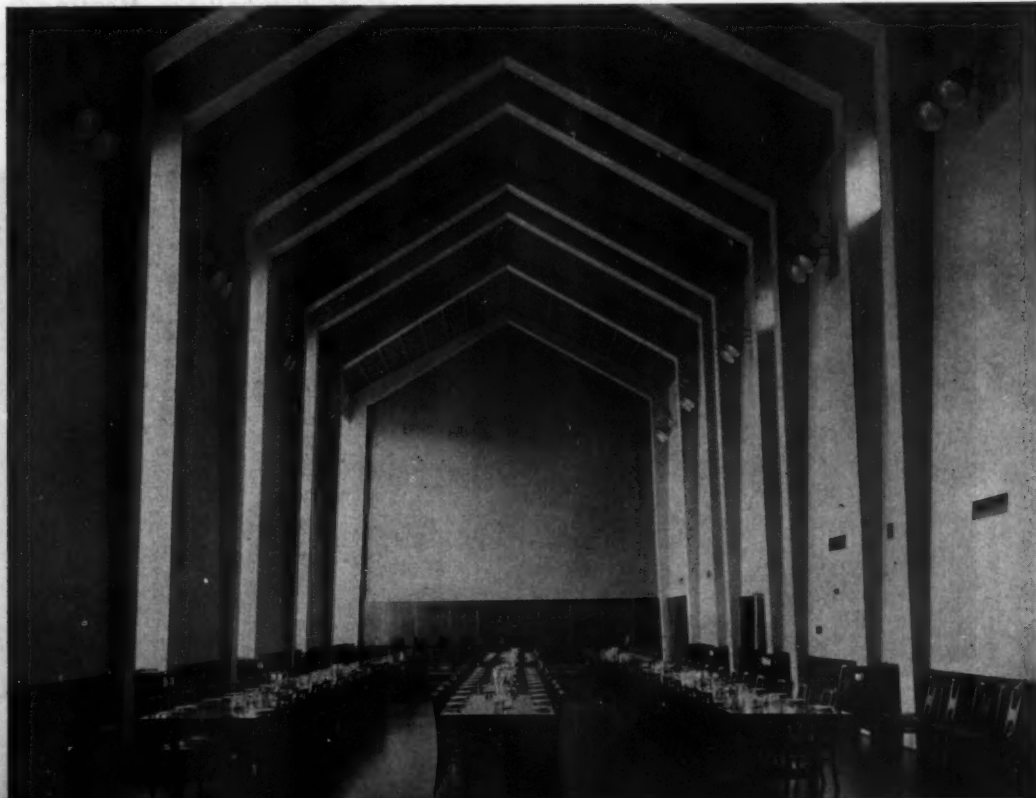
University House is the social center, contains 96 apartments for students and special guests, 30 student dormitory rooms and 30 for domestic staff, a 250-seat refectory, two suites of private dining rooms; and a separate suite of public rooms with its own entrance and garden for staff wives. Construction: brick cavity walls, wood floors on panel-heated concrete slabs. Above, left to right: Entrance with wood sculpture, "Repose," by Gerald Lewers; balconied north (sunny) façade; lounge wing with 5-ft overhang above insulating glass walls; courtyard has reflecting pool to temper the north sun



Ritter-Jeppesen Studios



Above, foyer to refectory; right, refectory, in which a large mural is to be executed on the end wall; ceiling is Indian red, walls light gray, verticals white



52



I

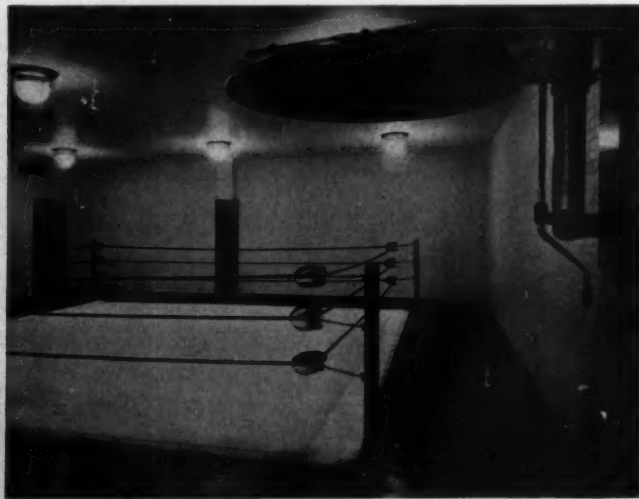
ties (below and right) and "cage" or field house





NORTHEASTERN UNIVERSITY, BOSTON, MASS.

Main gymnasium is 110 by 156 ft, has 25-ft headroom, stands for 1700, temporary seats for 1300 more. Women's gym, not shown, is 51 by 103 ft. Rifle range is 50 ft, has 5 firing points. Boxing room is one of several special facilities



COLLEGE BUILDINGS: NORTHEASTERN UNIVERSITY PHYSICAL EDUCATION CENTER

Joseph W. Mollitor



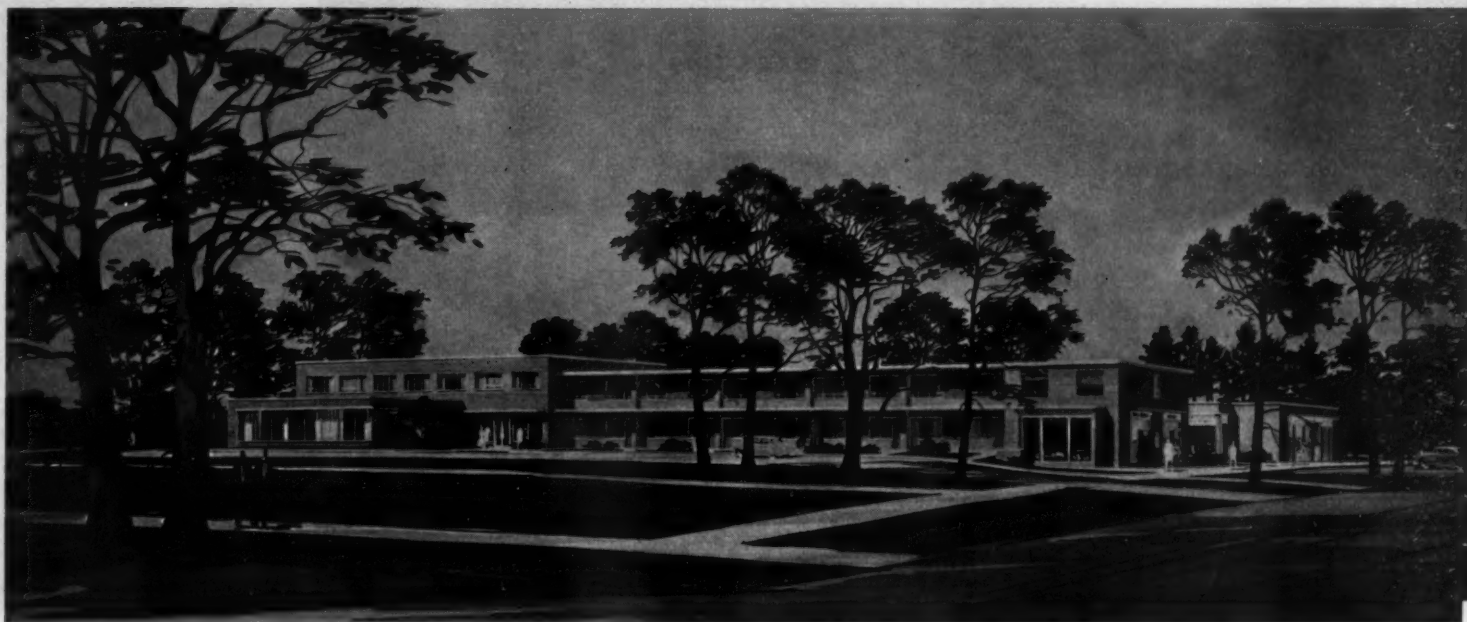
Above, exterior, cage at right; and rear of building. Below, interior of cage; trussed rigid frames, substituted for steel plate frames due to steel shortage, employ standard structural H-sections. Clear span is 159 ft, height at center, 42 ft. Floor is resilient mixture of clay and peat moss. Total cost of Center: \$1,602,690 or \$0.57 per cu ft



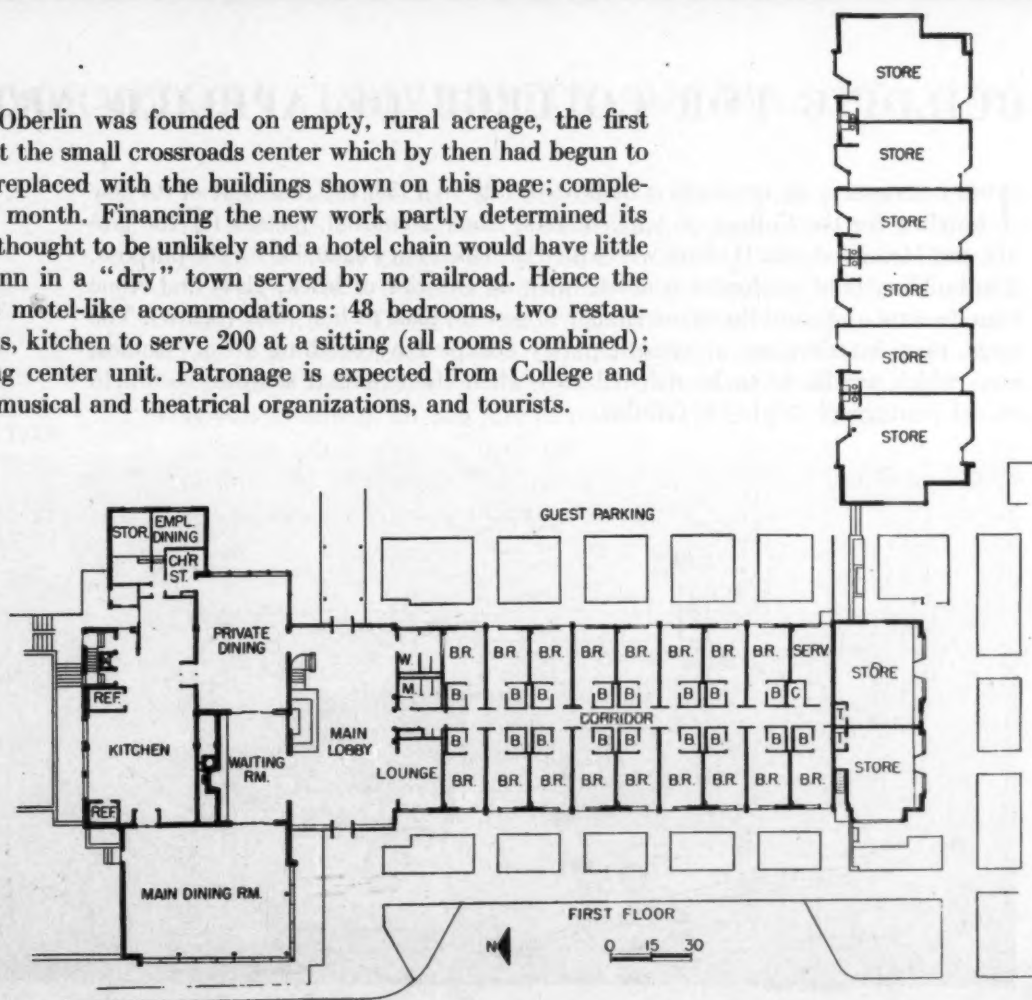
COLLEGE HOSTELRY: OBERLIN INN

OBERLIN COLLEGE, OBERLIN, OHIO

Architect, Eldredge Snyder; Landscape Architect, W. H. Lavery; Structural Engineers, Barber & Magee; Mechanical Engineers, Adache & Case



IN 1867, 34 years after Oberlin was founded on empty, rural acreage, the first Oberlin Inn was built at the small crossroads center which by then had begun to develop. It is now being replaced with the buildings shown on this page; completion is scheduled for this month. Financing the new work partly determined its nature, since a donor was thought to be unlikely and a hotel chain would have little interest in operating an inn in a "dry" town served by no railroad. Hence the combination of hotel and motel-like accommodations: 48 bedrooms, two restaurants, private dining rooms, kitchen to serve 200 at a sitting (all rooms combined); and the adjacent shopping center unit. Patronage is expected from College and business sources, visiting musical and theatrical organizations, and tourists.





Herman Kroll

COLLEGE BUILDINGS



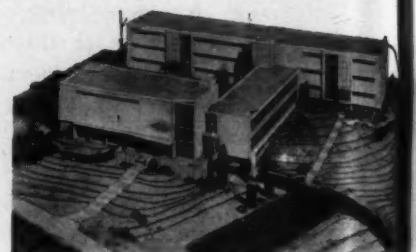
Herman Kroll



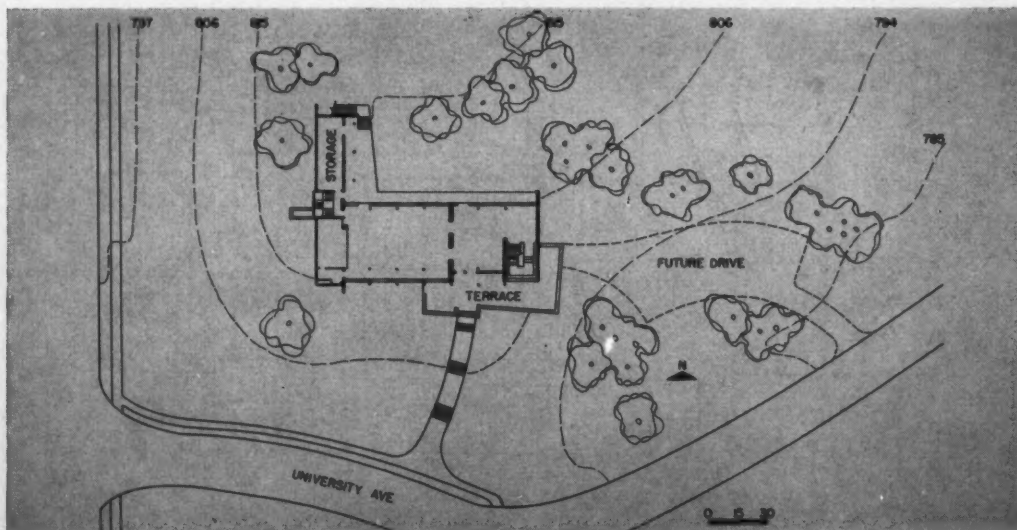
Wm. R. Whiteaker Studios

BUILDING FOR COLLEGE OF APPLIED ARTS

THE UNIVERSITY OF CINCINNATI dedicated, late in 1953, the first unit of its new building for the College of Applied Arts: Alms Memorial, named for the late Mr. and Mrs. Frederick H. Alms who willed the University \$200,000 for the purpose. The building is of reinforced concrete with an exterior of brick, glass and stone trim. Second and third floors are similar in general plan to first floor (below). The large, open interiors are at present partly occupied by teaching areas (studios, etc.) which are likely to be redistributed when the eventual scheme, shown in model photograph (right) is fulfilled.



Herman Kroll



ALMS MEMORIAL BUILDING,

UNIVERSITY OF CINCINNATI, CINCINNATI, OHIO

James E. Allan,
Archit.-Engr.

George Frederic Roth,
Consultant



Charles. R. Pearson

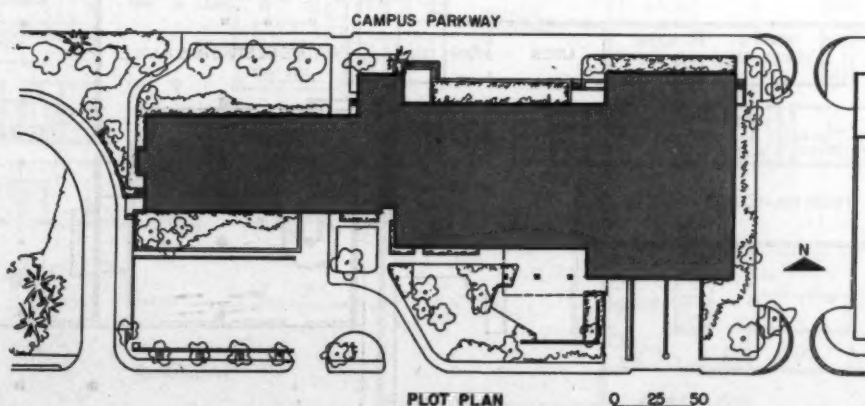
MEN'S DORMITORY, UNIVERSITY OF WASHINGTON

SEATTLE, WASHINGTON

*Young, Richardson,
Carleton & Detlie,
Architects and Engineers*

*John Paul Jones,
Supervising Architect*

STUDENT HOUSING at the University of Washington is expected to develop as a series of tower dormitories in pairs connected by separate dining halls and lounges and joined in the middle with a common kitchen. The high cost of urban land dictated the tall-building scheme. The buildings, eventually lining Campus Parkway, will be enhanced by reorganization of the automobile approaches and by landscaping. Of these the Men's Residence Hall shown here is the first. It houses 600 students and guests as well as dining, kitchen and recreation facilities. The first floor contains entrance, administration, mail and toilet rooms. Below is a garage for approximately 70 student cars; and under the dormitory proper are service and storage areas, music practice rooms, etc.

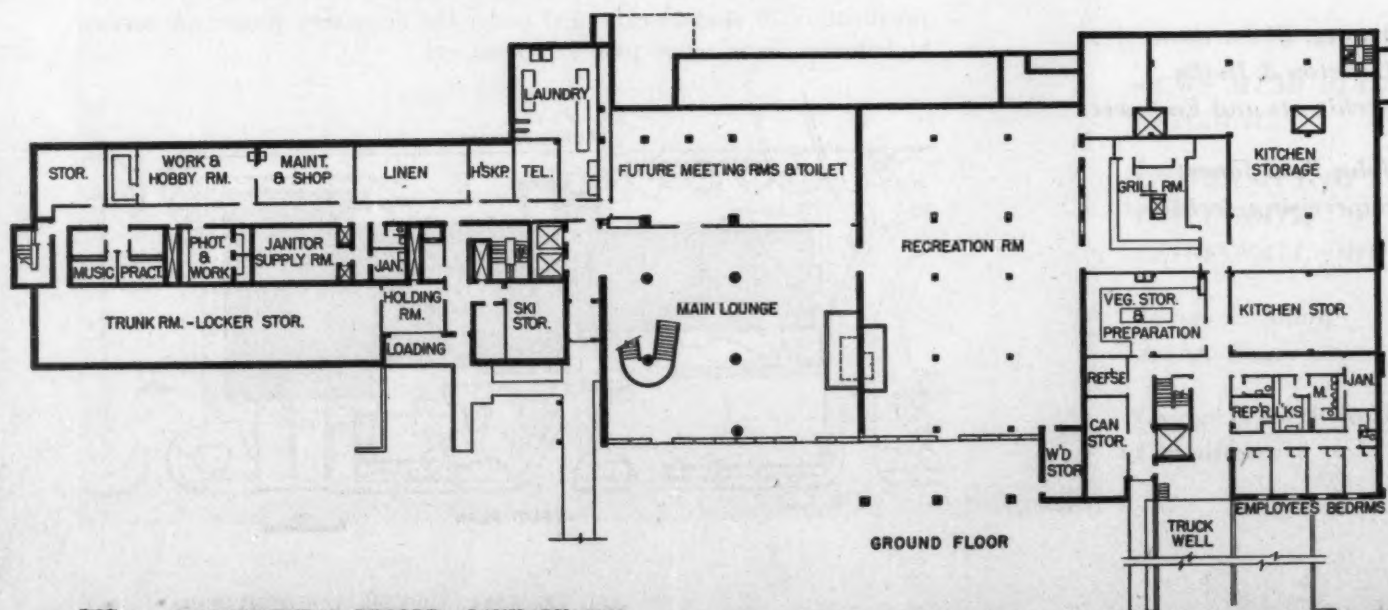




Food is served cafeteria-style; kitchen has room for more equipment so it can serve planned additional dining areas



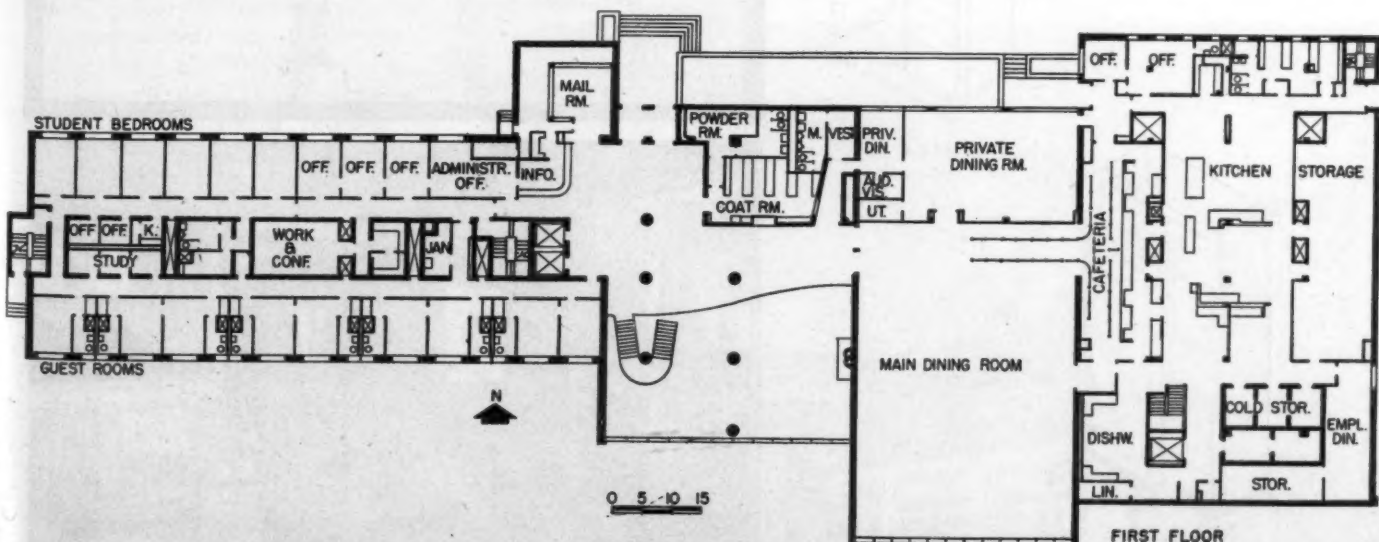
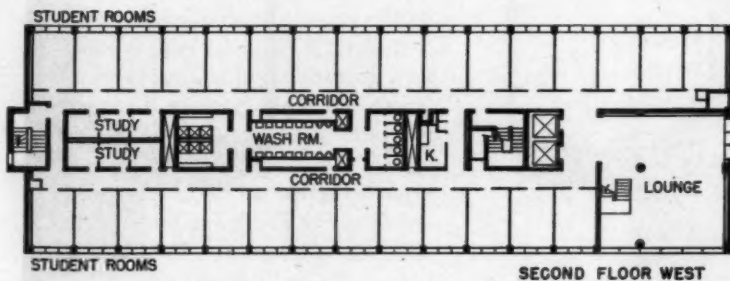
Charles R. Pearson





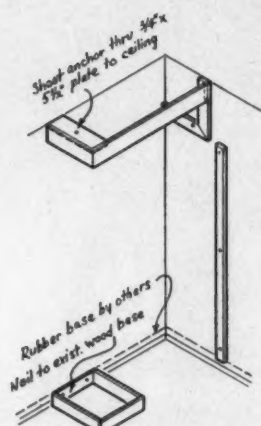
Building is organized into dormitory units of approximately 100 students each, housed on pairs of floors with a two-story lounge for each unit. Every floor has a Proctor's room, linen rooms, quiet study rooms, kitchenette facilities, storage for athletic equipment. High-speed, duplex control elevators and ample stairs afford access between floors

Main lounge on first floor is also a two-story room, notable for its huge fireplace and sculpture of the University's Husky mascot as well as the cantilevered stair connecting it with a balcony. Adjoining are a recreation room and a grill room containing a soda fountain

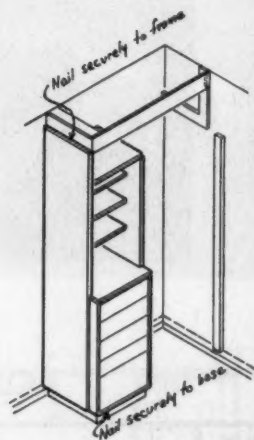


COLLEGE BUILDINGS: UNIVERSITY OF WASHINGTON DORMITORY

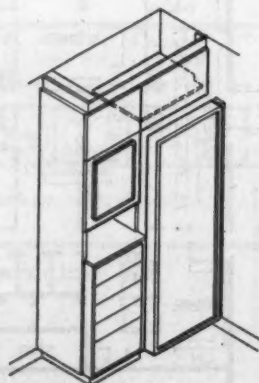
Each room has been designed for maximum efficiency, to provide ample storage, sleeping, social and study space compactly arranged. Yet, while economy was undoubtedly the controlling factor, nothing reasonable has been omitted that would contribute to an atmosphere suitable for study and relaxation. Frequently admired though inexpensive is the use of draperies, sun-yellow in rooms exposed to the north and blue in windows with southern exposure. Furniture, including wardrobes, bookcases, desks and built-in bolsters at the studio couches, was not only simply detailed for assembly on the job; drawings were also made to show how the mill-fabricated parts went together. Examples are the wardrobe assembly drawings below



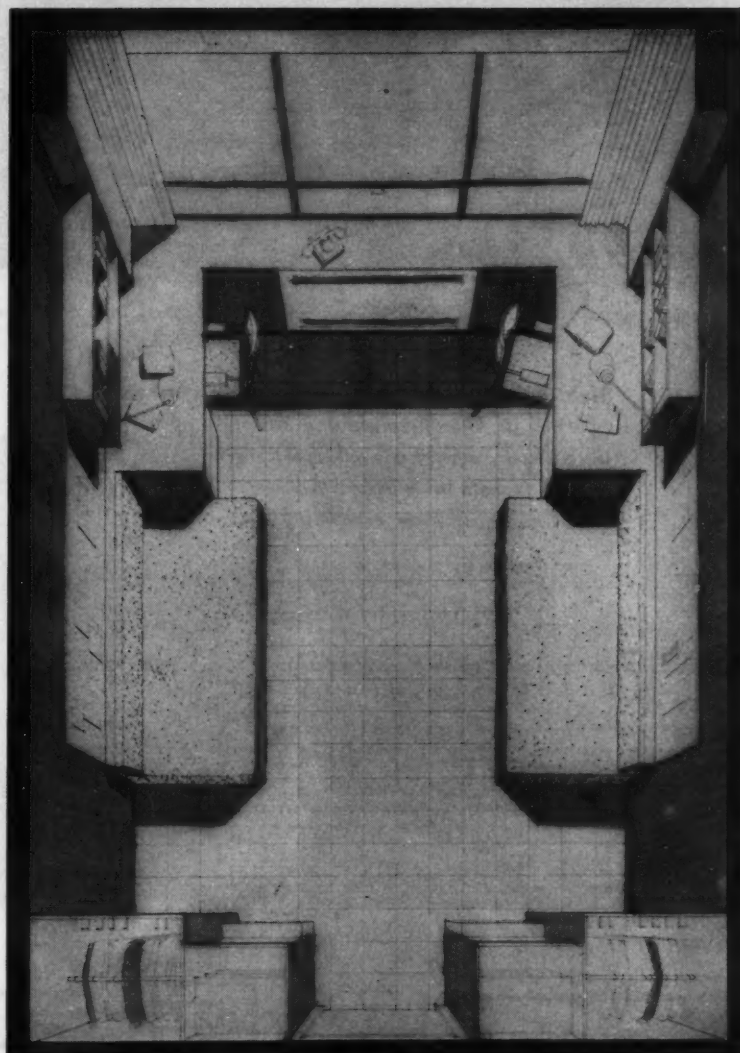
STAGE 1



STAGE 2



STAGE 3



THE COLLEGE HOUSING THAT HHFA LOANS BUILD

The college housing loan program administered by the Housing and Home Finance Agency under Title IV of the Housing Act of 1950 has already helped 226 institutions provide housing for 48,377 students; and only a little more than half the amount of the original authorization of \$300 million has been spent. Architecturally the results are most notable for their diversity — a circumstance stemming from an operating philosophy which puts a high premium on freedom for the individual institution and its architect. Architects have high praise for the operation of the program (see page 24), which

has been the responsibility of the College Housing Branch (Jay du Von, Director) of HHFA's Division of Community Facilities and Special Operations (John C. Hazeltine, Commissioner). On this and following pages, a progress report including representative examples of projects financed under the program . . . See Building Types Study No. 218 (pp. 125-150) for additional examples of HHFA-financed projects: North Campus Housing, University of Michigan; Men's Dormitory, University of Washington; Illinois Institute of Technology housing

By Albert M. Cole, Administrator
Housing and Home Finance Agency

EARLY IN 1950 representatives of American colleges and universities presented to the committees of the Congress of the United States a plan for long-term Federal loans at reasonable rates of interest which would enable these institutions to construct urgently needed permanent housing for students and faculty. The spokesmen for these institutions pointed out that the high costs of construction, the undesirability of increasing students' rentals beyond their capacity to pay, and the difficulty of securing long-term funds at reasonable rates of interest all combined to block their efforts to provide housing for present enrollments as well as for the increasing demands of the future. They also cited the deterioration of temporary barracks which had been provided with Government assistance for the short-term use of veterans enrolled under the G.I. Bill of Rights.

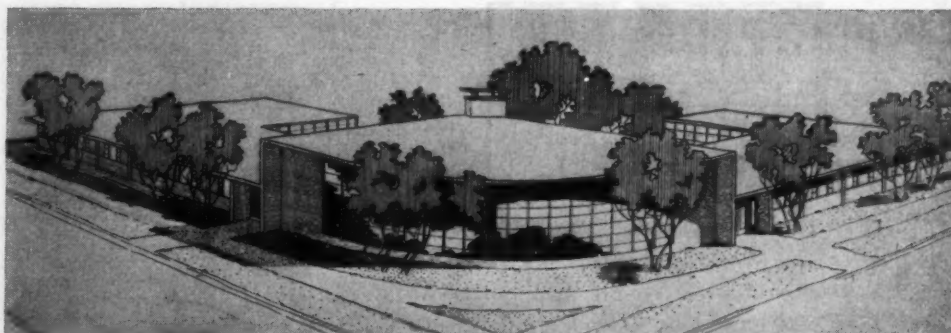
Congress adopted an amended form of the proposal in Title IV of the Housing Act of 1950 which authorized \$300 million in borrowings from the United States Treasury to finance such college housing loans for institutions unable to secure such loans from private sources at comparable rates. The legislation provided for a differential between the interest cost of borrowings from the Treasury and the interest rate to be charged to the colleges for the purpose of defraying the cost of administration of the program and making possible its operation without eventual loss to the Federal Government.

Spending at Midpoint

After a year's delay due to the outbreak in Korea, the first loan under the program was made in July 1951. Since that date a total of 144 loans in the amount of \$112.8 million have been ap-

(Continued on page 240)

Reynolds Photography Inc.



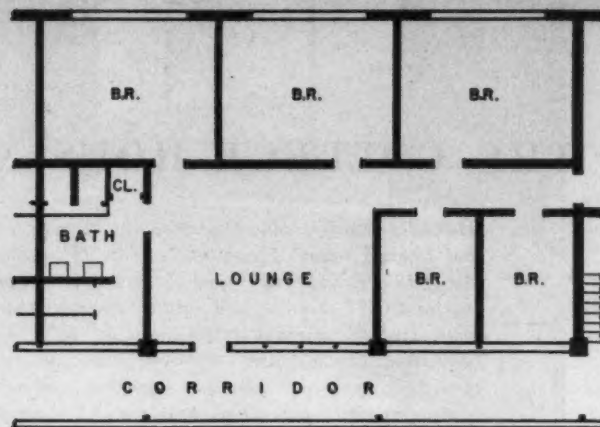
Top: men's dormitory, Colorado A & M — four three-story dormitory wings with central two-story lounge-dining unit; capacity 400, cost \$1.5 million, area per occupant 248 sq ft; architect, James M. Hunter.
Above: women's dormitory, Upper Iowa University — two one-story L-shaped wings joining central high-ceilinged lounge; capacity 54, cost \$238,000, area per occupant 265 sq ft; architect, William A. Lockard.
Below: men's dormitory, Tufts College (Mass.) — three- and four-story, includes dining facilities; capacity 280, cost \$1,065,000, area per occupant 239 sq ft; architect, Arland A. Dirlam



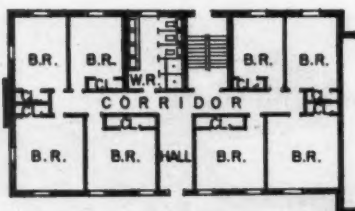
Duffie



Ingersoll Studio



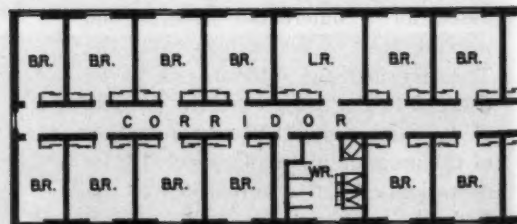
Two men's dormitories for Menlo (Junior) College (Cal.)—two-story units provide for 128 students and eight faculty apartments; cost \$520,000. Typical living arrangement (sketch) provides lounge and washroom for each eight students. Area per student, 204 sq ft; study-bedroom per student, 107 sq ft; toilet-shower per student, 15 sq ft. Architect: Kingsford Jones



Women's dormitory, University of Maryland—nine connected four-floor units; capacity 488. Sketch shows typical living unit. Architect: Ted Englehardt. This plus a dormitory for 448 men by Mr. Englehardt and another for 368 men by Walton and Madden (see page 242) cost \$2,350,000, for lowest per-bed cost in HHFA program. For all three: average area per occupant, 156 sq ft; study-bedroom, 100 sq ft; toilet-shower, 13 sq ft

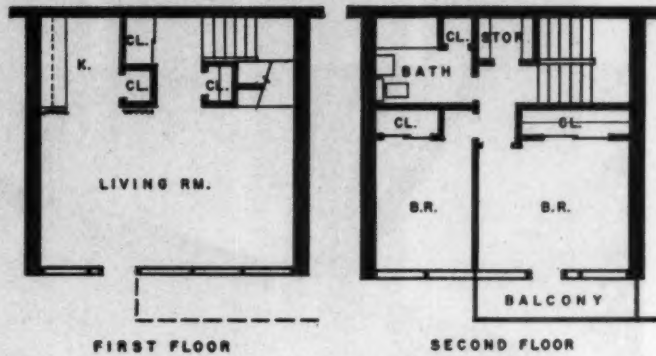
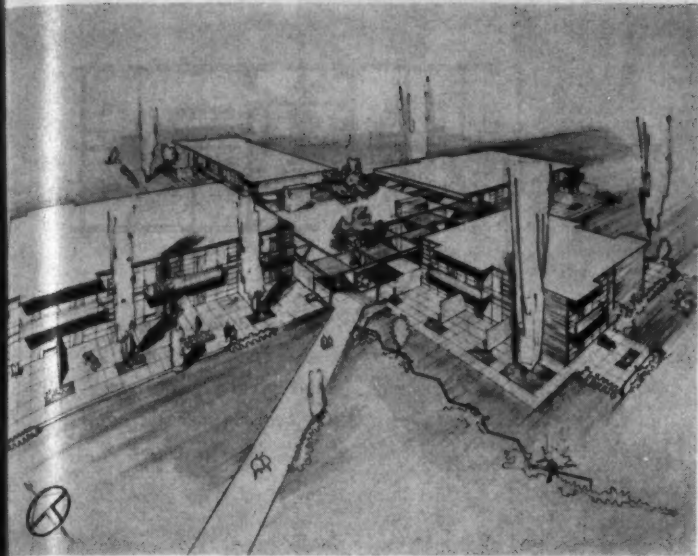


Feet-Melbrook Inc.

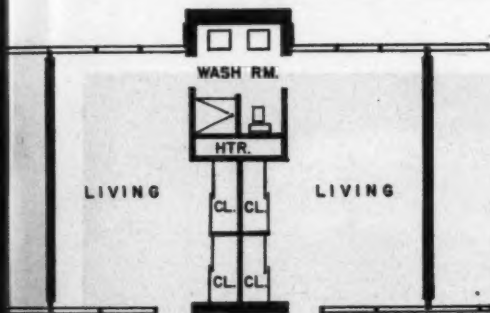


Women's dormitory at Drake University (Iowa) is one of three new dormitories which were completed last year at cost of \$1,648,000 to house 384 women and 201 men. This unit accommodates 152; typical floor has 22 bedrooms (double 16 x 13 ft, single 16 x 9 ft), two washrooms, living room. Architect: Eero Saarinen

HHFA COLLEGE HOUSING PROGRAM



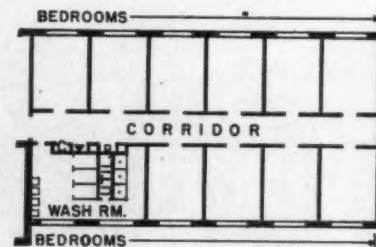
One of four separate two-story units containing a total of 92 apartments for married students and 52 for faculty at Indiana University. Total cost, \$2,050,000; average area per student apartment, 615 sq ft; average area per faculty apartment, 1140 sq ft. Two of the units have duplex apartments — sketches show typical plans in this one. Architect: Edward D. James



Men's dormitory, Trinity University (Houston) — two three-story units of lift-slab construction; capacity 150, cost \$480,000. Sketch shows typical four-student accommodation. Total area per student, 255 sq ft; study-bedroom-toilet-bath per student, 170 sq ft. Architect: O'Neil Ford



Clarence John Laughlin

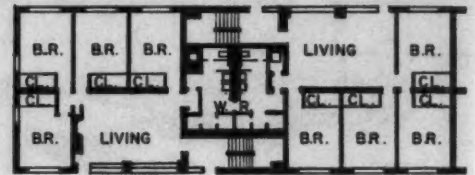


Women's dormitory, University of Southern Illinois — three connected four-story units, dining facilities included; capacity 422, cost \$2,059,000. Sketch: typical living arrangement in one unit; lounge adjoins with another 12 bedrooms beyond. Total area per student, 255 sq ft; study-bedroom per student, 90 sq ft; toilet-shower per student, 12 sq ft. Architects: Shaeffer, Hooton & Wilson

HHFA COLLEGE HOUSING PROGRAM



Williams & Meyer Co.



Men's dormitory, Knox College (Ill.) — first of three units to be built had eight men to one living room suite (new ones have 12); capacity 96, cost \$443,000. Sketch shows typical living arrangement. Area per occupant, 235 sq ft; study-bedroom per occupant, 111 sq ft. Architects: Skidmore, Owings & Merrill



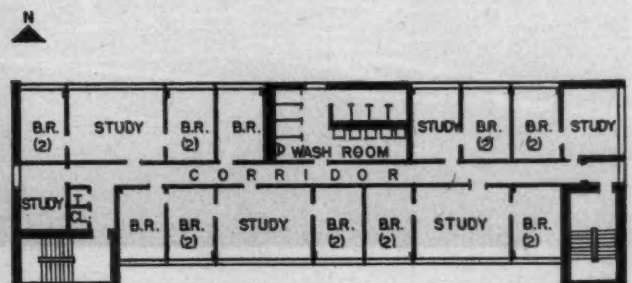
Men's dormitory, College of Southern Utah — capacity 200, cost \$230,000. Apartments are designed primarily for four men but with a view to married student occupancy as needed. Gross area, 21,449 sq ft. Architect: Robert Gardner



Northwest Photographic Illustrators



Photo: Women's dormitory, Reed College (Ore.) — capacity 72, cost \$230,000. Architects: Belluschi and Skidmore, Owings & Merrill. Sketch: plan of typical wing in projected dormitory for 101 men designed for Reed by same architects; to have two three-story dormitory wings with one-story lounge section; cost \$300,000. Area per student, 239 sq ft; study-bedroom area per student, 20 sq ft; toilet-shower area per student, 20 sq ft





GLARELESS DAYLIGHTING IN HAWAII

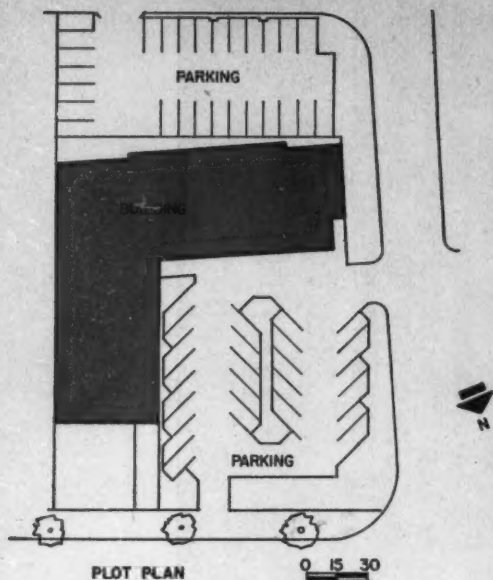
Hawaiian Life Insurance Co. Building, Honolulu, T. H.

Vladimir Ossipoff, Architect

GOOD DAYLIGHTING without sun glare is always a problem in a climate such as Hawaii's, and architects in such areas are constantly coming up with new solutions to that problem. This new office building, located midway between downtown Honolulu and Waikiki, uses vertical fins, supplemented on the south-west side with sun baffles; there are no windows to the west.

Since the building fronts on busy Kapiolani Boulevard and houses the Internal Revenue offices and a restaurant in addition to the Hawaiian Life Insurance Company and other offices, parking space was also a major problem.





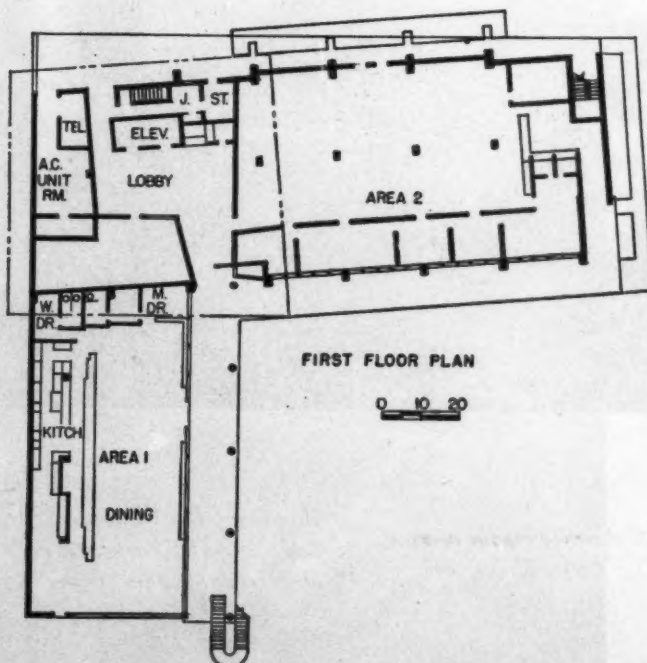
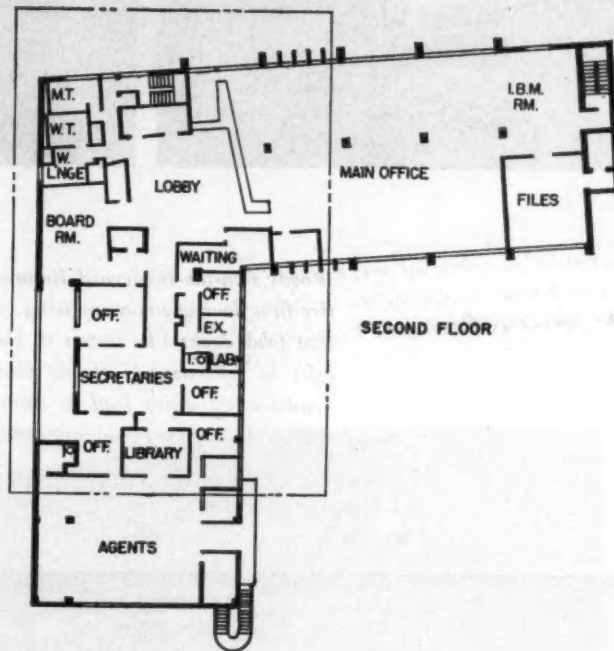
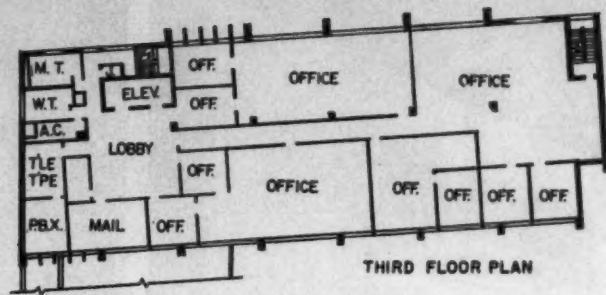
The long wing of the L-shaped building is six stories in height, the shorter wing only two stories. Construction is concrete, on a pile-driven foundation; exterior frame is steel, interior frame is open with joists and cellular steel decking. Concrete is painted white; vertical sun fins are aluminum, enameled a pale blue-gray-green; spandrels are painted dark brown. Ceramic tile on exterior is variegated rust-brown. The restaurant, on the ground floor of the two-story wing, fronts on Kapiolani Boulevard; its long west wall, facing the parking area, is entirely of glass, protected from the sun by the second floor extension.

Position of building on lot provides two separate parking areas, one for restaurant patrons and other transient visitors, and one at the rear for building occupants. Above: northeasterly elevation, with restaurant at left and roof of penthouse just visible. Below: opposite facade; exterior fire stairs are at extreme left of photo





Main entrance (above) is at end of covered walk flanking restaurant. Lobby (below) has direct access to both front and rear parking lot. Internal Revenue Department occupies all office space on first floor and has separate entrance; (see page 160). Hawaiian Life has second floor of both wings



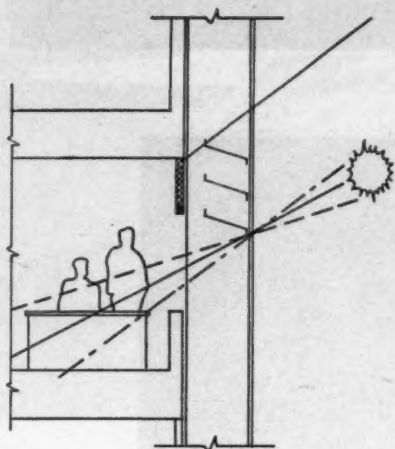


Woody's-on-the-Boulevard Restaurant occupies entire first floor of two-story wing. Architect explains that what looks like cotton in the window (above, left) is reflection of clouds over the mountains. Cantilevered stairs lead to agents' room in Hawaiian Life offices, reducing interior traffic



Hawaiian Life Insurance premises on second floor: above left, reception desk in elevator lobby; above right, agents' room; opposite, main office

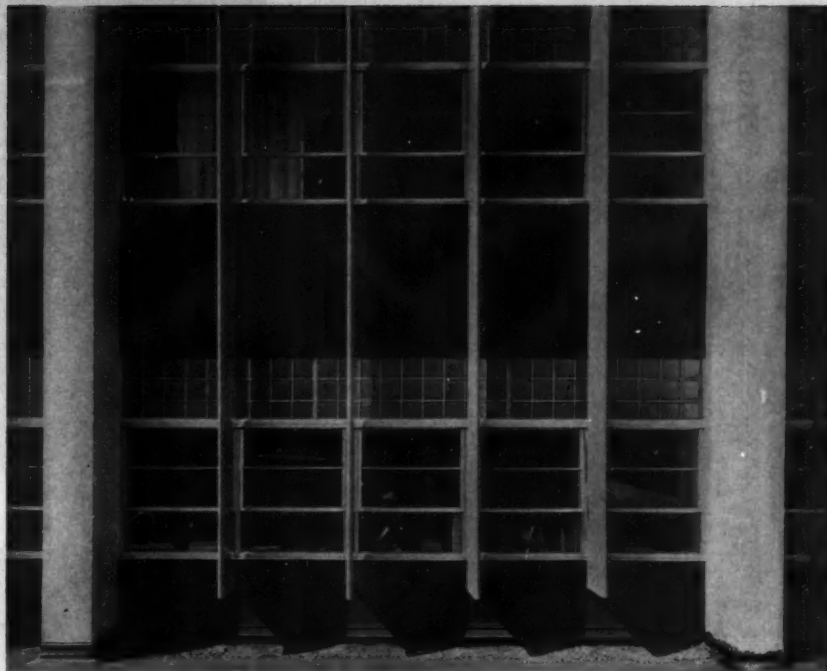
Sun fins differ on two sides of building, and many studies were made of their effectiveness. On south, sloping baffles were used between vertical fins, but on north vertical fins alone were found to be adequate (right)



SOUTH FACE

- SUN AT 4 P.M.
- SUN AT 9 A.M. & 3 P.M.
- SUN AT 10 A.M. & 2 P.M.

R. Wenham



Right: Internal Revenue Department premises on first floor; Departmental requirement for solid walls 8 ft high resulted in less open facade than originally planned. Below: entrance to Internal Revenue; concrete slab outside fire stairs is faced with Cremona Italian tile



R. Wenham

Mr. Ossipoff's office in the penthouse (right) is in tones of dark eggplant and white. Window drapery is vertical and horizontal split bamboo, desk is Janizero. Egg-crate ceiling has concealed lighting





AMENITY VALUES IN A SMALL FACTORY

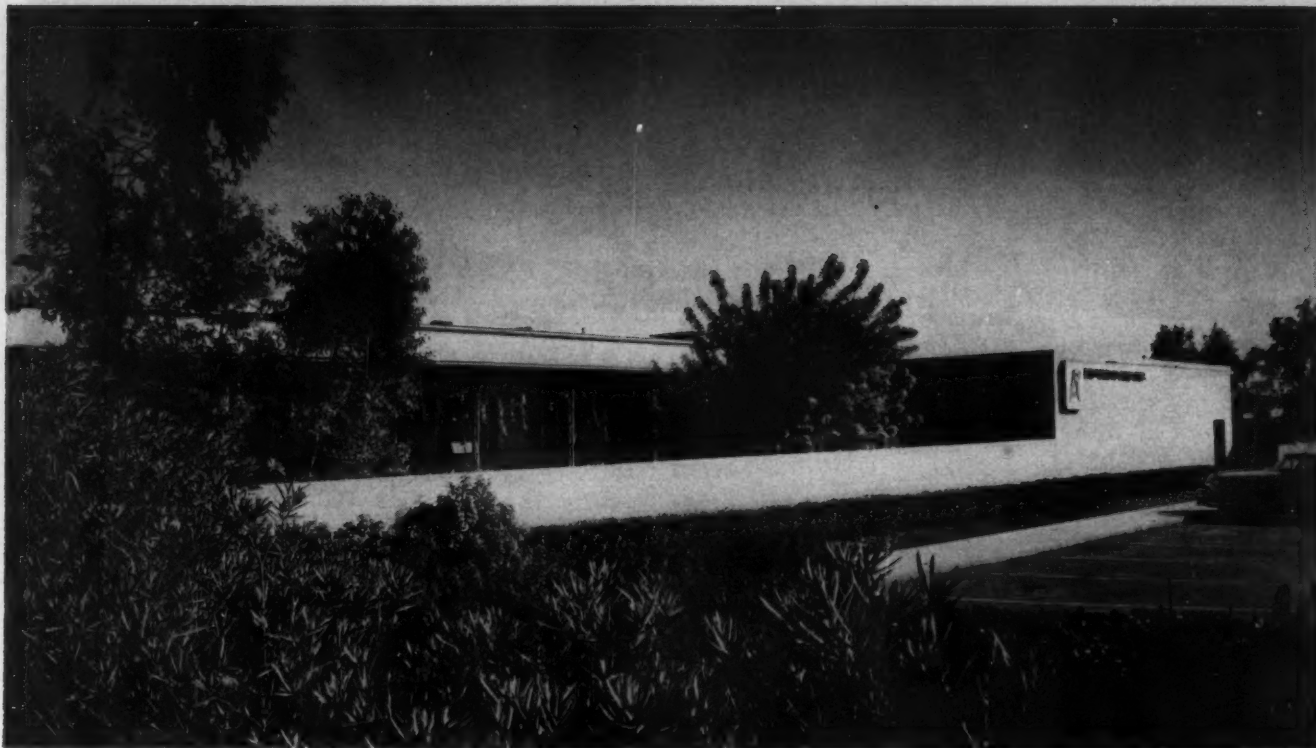
*Additions to Plant of Avery Adhesive Label Corp.
Monrovia, Calif.*

George Vernon Russell, Architect

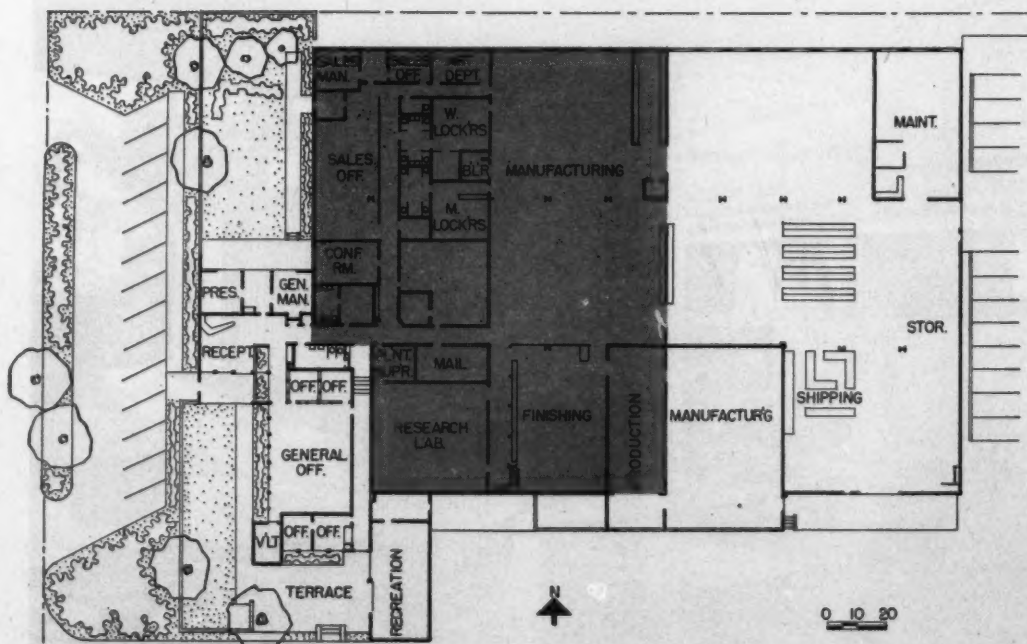
Julius Shulman



AVERY ADHESIVE LABEL CORPORATION



A MENITY VALUES"—a vague term for some pleasant plusses—are strongly developed in this small factory and office building. Notice, in the photo above, the walled-in garden which protects executive offices from street noises and confusion, also from dirt. There is also the pleasant entrance garden, with glass-walled reception space, with displays and planting tying indoors with outdoors. Employees have a large recreation room, with sliding glass panels opening to another garden; hiring offices open to this same terrace (photo opposite). Costs for these "extras" could not be large.



The alteration adds office space to one side of an older building (shaded area in plan), more production space to the other. The garden walls tie old and new together, and help somewhat in the process of absorbing the old with the new. The architect expresses his conviction that "alterations which disregard the existing building . . . are as wrong as a zoot suit on Discobolus"

One can imagine that the strains of being a president are considerably eased by the pleasant outlook from this office (below, left). Production area (right, below) is well lighted and not crowded. Certain adhesive rooms are designed for minimizing possible blasts from volatile materials



Lunch time is a pleasant hour for employes in the room shown below. Large sliding glass panels open the room to the brick-paved terrace. Walls in this section of the building are of a tilt-up panel system largely developed by the architect, permitting continuous fenestration

Julius Shulman

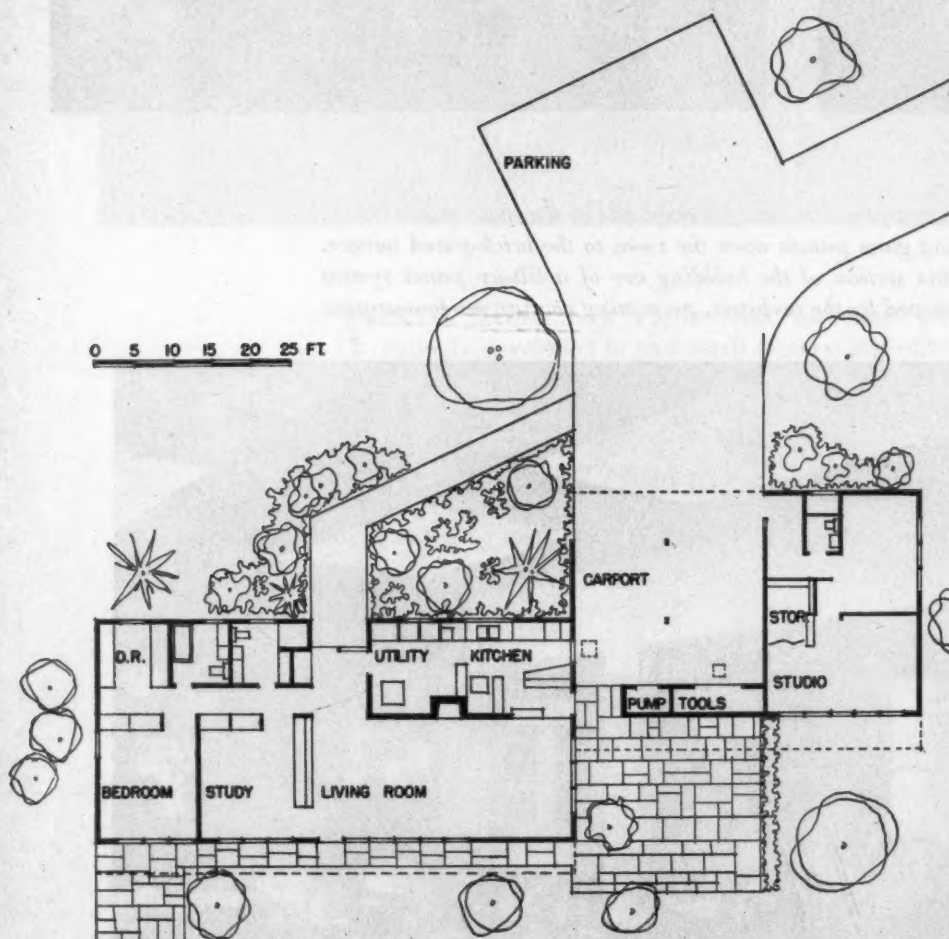




ARCHITECT'S STUDIO-RESIDENCE IN VIRGINIA

*House for Mr. and Mrs. Harry E. Ormston
McLean, Va.*

Harry E. Ormston, Architect



THIS STUDIO-RESIDENCE was planned by the architect-owner for maximum separation of home and office, with both under one roof. The carport was used as the divider, and the terrace was made the visual link between the two units.

Owner's requirements were: a one-level plan with principal rooms oriented to view at south; a minimum of fixed partitions and a maximum of movable head-high storage-type room dividers to assure privacy without limiting interior spaciousness. The 2½-acre site, originally a flat open field without any trees, has been transformed with the planting of over 500 trees and shrubs.

Exterior of house is natural redwood vertical siding; interior walls are plaster and birch plywood, oil painted and waxed.



Architect-owner's studio is virtually a separate building, linked to house proper only by carport roof and rear terrace. Studio has own entrance adjacent to driveway for business visitors, but connects through carport with kitchen, living area

Windows on front of house (right above) are small and high to insure privacy. Rear walls (right and below) are largely of glass to take advantage of view; wide roof overhang controls sun penetration. Opposite page: top, rear elevation, with living quarters at left, carport in center, studio at right; bottom, end of studio wing, living room wing, in background. Below: living room and study are separated by book shelf unit which does not reach to ceiling; draw curtain provides privacy when needed. All built-in furniture such as book cases, storage cabinets and desks were designed by architect and constructed on site of birch and fir plywood. Recessed ceiling lights also were designed by architect





CONSERVATIVE CONTEMPORARY IN NEW ORLEANS

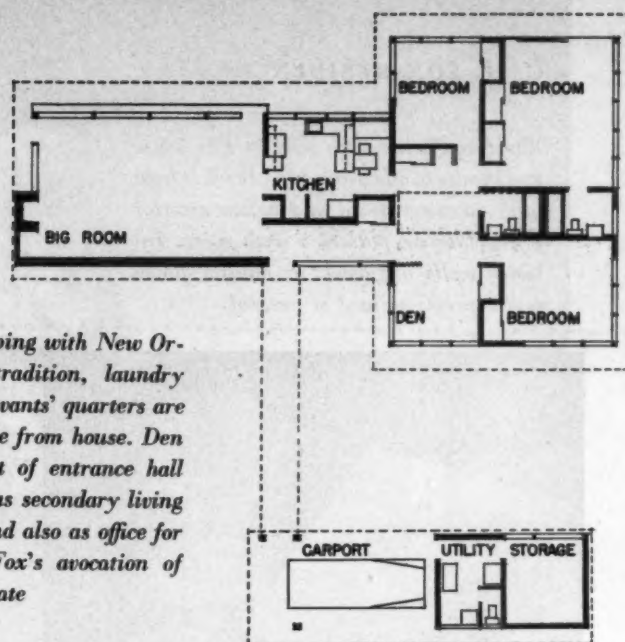
House for Mr. and Mrs. C. B. Fox

*John W. Lawrence and Sam T. Hurst
Architects*

Wm. R. Allen, Jr., Collaborating Architect



Main entrance (above and opposite) is connected with carport by covered walk with pond to right of entrance; site was left as natural as possible, with landscaping used only to enhance shady and cool effect of existing trees, light brush, saplings and moss



In keeping with New Orleans tradition, laundry and servants' quarters are separate from house. Den to right of entrance hall serves as secondary living area and also as office for Mrs. Fox's avocation of real estate

0 5 10 15 20 25 FT.

THE OWNERS of this house were torn between traditional and contemporary design when they first talked with their architect. They knew that they would not be content with traditional, but they "couldn't quite bring themselves to live in a house with that 'stark' look," the architect reports, and "they definitely didn't want a flat roof." They *did* want an informal living area, which they always referred to simply as "the big room," and insisted that the bedrooms have direct access to the kitchen out of the living room line of vision. And they put a firm tabu on both a separate dining room and a dining alcove.

Joseph W. Mollitor



C. B. FOX RESIDENCE

Wood and brick were used in Fox house specifically to add warm look. Brick is light pink mixture; board and batten exterior is rough-sawn, painted a dark green. Interior walls are brick in natural finish and cypress, painted or natural



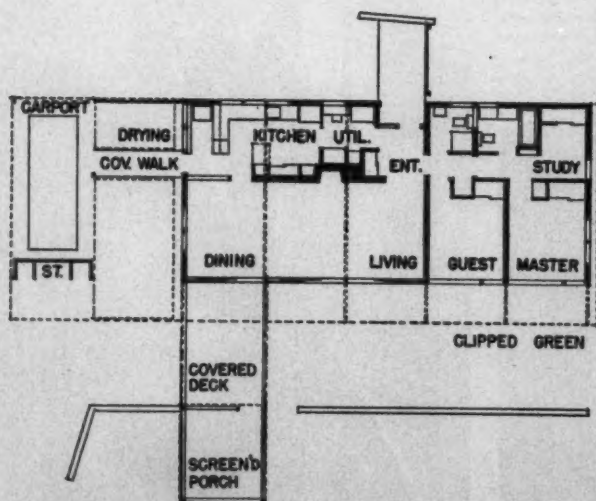
Joseph W. Malliar



SMALL HOUSE MADE TO LOOK LARGE

House for Dr. Clara Tucker, Baton Rouge, La.

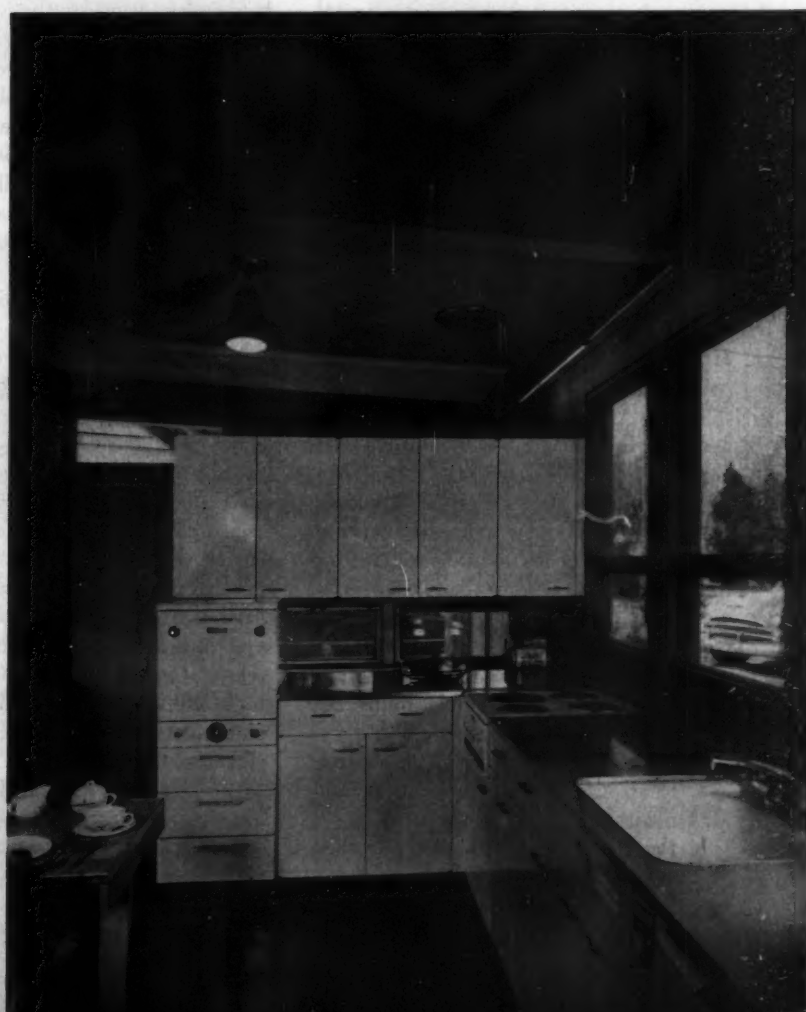
John W. Lawrence and Sam T. Hurst, Architects





THE PROBLEM here was to make a small house (1200 sq ft) look large enough to fit its 100-by 300-ft site. The solution: a rectangular screened porch, quite separate from the house except for overhead beams which form the frame for a sliding canvas roof over an intervening terrace. Owner is head of Home Economics Department at Louisiana State University, so kitchen (below) came in for special study.

Joseph W. Molitor



FOOD SERVICE PLANNING IN COLLEGES

Centralized systems are the trend. Cafeteria service is on the increase, even though college administrators emphasize the educational value of more formal dining. Cost is the determining factor

COLLEGE FEEDING is "big business" today. Enrollments are higher than ever before, and are expected to go higher, and costs of all services and supplies have mushroomed. Faced with these facts, and the necessity of serving as many as 40,000 or 50,000 meals a day on some campuses, college authorities realize that food handling facilities must be designed for maximum productivity.

In the planning stage, close cooperation is essential between the architect and food service consultant, whether they be on the college staff or retained by the college. Most experienced food service directors have developed ideas from practical usage of equipment and layouts, and they are familiar with trends in the use of new food materials and appliances and modern cooking methods. They know that a solution to the college cost problem lies in a centralized feeding system. The nucleus of this system is a central stores building with facilities for storage and basic preparation of food for all outlets on the campus. It is operated like a business, with customers billed for cost of supplies ordered plus a prorated carrying charge for overhead, labor, plant depreciation, etc. Shipments from wholesale suppliers are received by rail and truck, stored in designated areas under controlled temperatures and then trucked to campus kitchens on a regular delivery schedule.

The advantages of operating a plant of this nature, as listed by Garner G. Collums, Director of University Housing at the University of Oklahoma, are that it —

1. Eliminates the necessity for large storerooms and warehousing expense in the kitchens of the residence or eating halls, since daily deliveries are made from the commissary.
2. Provides better storage facilities than could be afforded in each unit.
3. Cuts loss of perishable items because of better storage.
4. Makes possible closer stock control.
5. Centralizes purchases and payments.
6. Permits buying for future use when market conditions are favorable.

7. Permits buying of "specials" from companies which are long in certain items or which desire an inventory reduction.
8. Reduces labor in processing meats because of extensive use of labor-saving equipment such as power saws, grinders, tenderizers, patty machines, etc.
9. Eliminates waste in processing.
10. Permits centralized baking of pastry and eliminates the need for large ovens, mixers, sifters, etc., in kitchens.
11. Aids in the use of standard menus in all feeding areas.
12. Assists in unit food cost control by providing uniform servings of processed foods.
13. Provides cheap ice as a by-product of the refrigeration system.

Miss Mildred A. Baker, Director of Food Service at The Pennsylvania State University, believes that extensive facilities for both quick-freezing and deep-freeze storage of fruits, vegetables and meats (1) make it possible to utilize the labor force and equipment more fully during summer and holiday vacation periods when dining halls are closed and (2) assure an adequate supply of products during bad weather when deliveries might be delayed.

Trucks bringing supplies from distributors are unloaded at receiving docks usually by either a conveyor system or a system that uses pallets and fork-lift trucks. When the Food Service Building at the University of Michigan was occupied in 1948, it featured an elaborate conveyor system. Today it uses a pallet and fork-lift system, which has proved to be both fast and practical. In the new Food Service Building at Michigan State College a combination system has worked. A conveyor system relays stores from the loading platform to storerooms located directly below, and pallets and fork lifts carry stores on elevators to aboveground storage areas. Meat is usually attached to hooks on an overhead track, at some point of which is a scale for checking its weight before it reaches the refrigerator.

One of the major advantages of a central storage system is the savings resulting from basic preparation of food before delivery to campus kitchens. Most central stores buildings have butcher shops in which meat is prepared according to orders from food outlets. The prepared meat is packed into pans, covered with wax paper, tagged with order, weight and destination and then stored in refrigerators until delivery. The butcher shop is best located adjacent to meat refrigerators.

Some food services have found that it is more practical to order bread from outside suppliers than to bake it themselves. However, many central storage areas have bake shops in which all other baking is done. The bake shop should be planned so that it is close to the storage area for flour — or under it, as at the University of Michigan, where large sifters measure the flour and drop it through chutes to mixing bowls in the bakery below.

Generally the storerooms for meat and fresh products should be located as close to receiving docks as possible, because these are the supplies which will be ordered most often. Frozen foods and canned goods are usually ordered only once a year and such supplies as flour and sugar only once a month.

Some colleges maintain that an experimental kitchen in the food service building pays off in food savings. Such a kitchen-laboratory duplicates in size and kind each piece of equipment used in unit kitchens. Specifications for foods purchased are checked here, and formulas for large-quantity cookery are standardized to ensure correct preparation of food in all units.

An intercommunication system is a vital part of a modern food service plant. It is important both in the central stores building and in the kitchens and dining rooms of residences and eating halls. In the central stores building outlets should be connected from the large storage areas and butcher and bake shops to a control station in the manager's office. In eating halls, communication is advisable between all

sections of the kitchen and the scullery, serving line, manager's office and eating areas.

Student Feeding Facilities

Of the satellites dependent on the central stores building, the largest and most important are the student feeding facilities. These vary in type according to the following general breakdown prepared by Theodore W. Minah, Director of Dining Halls at Duke University:

Cafeteria Service

1. Pay-as-you-go service, with multiple-choice menus.
2. Multiple-choice menu combined with menu combination intended to encourage the student to buy complete, well-balanced meals.
3. Board, or contract, type feeding where students pay for their meals in advance; cafeteria type service with little or no menu selection.
4. Hollow square, or colonnade, system of cafeteria service planned for speedy service.

Table Service

5. Board type of feeding; family style or plate service (usually a dining room built as a part of the dormitory).
6. Waiter service; pay-as-you-go, with menu selection and provision for cooking to order.

Ideally, table service is most suitable if the dining operation is to be an integral part of college training. However, the cost factor has caused many colleges to compromise, since cafeteria service is most practical from the aspects of speed, staff, economy and space. M. R. Shaw, Director of Residential Halls at Cornell University, explains, "Paradoxically the trend of thinking by educators and personnel administrators on college campuses during the past decade has been to emphasize the educational value of dormitory living and dining operations. We here at Cornell have wanted to develop more leisurely dining for all students under gracious

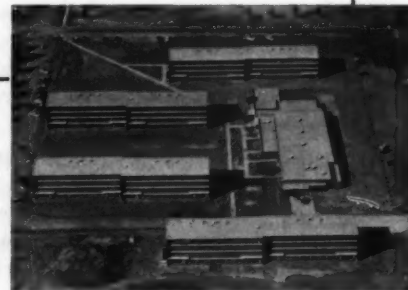


Food Service Building, University of Michigan — Louis C. Kingscott & Associates, Architects; Lynn W. Fry, Supervising Architect. Rails lead to loading dock, far right. Overhead door raises to admit trucks

Centralized feeding system stores supplies in central storage building and distributes them to various outlets on campus, such as university hospitals, laboratories (for research) and student union buildings. Largest consumers are student dining areas: shown below left — residence hall with dining room, and below right — dining hall serving a number of residences. Bottom photos show typical dining rooms and a snack bar



Duke University—Horace Trumbauer Co., Architects. Receiving platform, rear of Graduate Center



University of Oklahoma—Sorey, Hill and Sorey, Architects. Central dining hall serving four residences



University of Arkansas—Dining room at Holcombe Hall, women's residence. Breakfast and lunch cafeteria style, dinner served

University of Michigan—Folding doors open to enlarge hall in men's residence. Cafeteria style



San Francisco State College—Part of main dining room in College Union. Cafeteria style, but can be converted to table service

Duke University—Coffee lounge in Men's Graduate Center



The second floor of Brody Hall at Michigan State College serves six residence halls (three completed, three proposed). Students enter through lobbies to separate serving lines for each of four dining rooms. An accordion-type partition between Dining Rooms A and B folds back to provide one large room. Food is taken from the delivery entrance directly to storage areas on the second floor by elevator at times that do not conflict with food preparation and serving. Flow lines from storerooms to preparation areas and then to serving lines are shown by dotted and solid paths, respectively. Equipment is arranged so that as few steps as possible need be taken. Salads and fruits are taken to refrigerated wall compartments and warm foods to heated compartments and are passed through them to serving lines. Dirty dishes from Dining Rooms A and B are bussed directly to dish washing rooms. Dishes from Dining Rooms C and D are taken first to pre-wash rooms and then carried to washing machines on conveyor systems. Ralph R. Calder, Architect. Emery G. Foster, Manager, Dormitories and Food Services

Keyed areas on the plan:

- | | |
|--|--------------------------------------|
| 1. Elevator | 15. Roasting ovens |
| 2. Milk refrigerator | 16. Work tables |
| 3. Meat refrigerator | 17. Pot racks |
| 4. Deep freeze | 18. Dry bread cabinet |
| 5. Cook's refrigerator | 19. Pot washing area |
| 6. Potato storage | 20. Bakery storage |
| 7. Vegetable refrigerator | 21. Cook's refrigerator |
| 8. Peeler | 22. Baker's refrigerator |
| 9. Work tables | 23. Salad refrigerator |
| 10. Vegetable and salad preparation area | 24. Pre-wash room |
| 11. Fryers | 25. Dietitian's office |
| 12. Kettles | 26. Glass dispenser and water cooler |
| 13. Steam cookers | 27. Accordion-type folding partition |
| 14. Grills | |

Garbage disposal units located at 8, 9, 10 (two), 19 and dish washing room (two)

living conditions but, like the rest, have been forced to develop informal eating facilities in order to control the costs of space, equipment, and staff."

Many colleges offer a combination system, with two meals under Plan 3 and the evening meal under Plan 5. Some colleges use Plan 5 in women's residence halls and a combination in other dining areas. On many campuses undergoing building programs a main dining hall is being planned to serve a number of residence halls. In such large dining halls, with as many as four separate dining areas, Plan 4 is popular. Brown University's main dining room will seat 800 students, all served by student waiters. Around the perimeter of this area are 18 private dining rooms, 17 of which are used by fraternities and the other for special

functions. This is an unusual feature, since central feeding plans on most campuses do not include fraternity and sorority groups. Student Union buildings, and oftentimes residence halls, have grills or snack bars operated on either Plan 1 or Plan 2.

Kitchen Design

The design of the kitchen and dining areas depends, of course, on the type of service planned. Flow charts are helpful in integrating food facilities areas so that as many bottlenecks as possible are eliminated. Time is saved if steps are saved, and confusion is obviated if lines of flow do not cross.

Stainless steel kitchen equipment is preferred above all others for ease of maintenance. Sectional planning is desirable, with ranges, ovens, grills, fryers,

kettles and steam cookers in separate locations. Drainage should be adequate under kettles and steam cookers. Grills should have grease troughs with some provision for disposal of scrapings. A ventilation hood over the area in which this equipment is located should have enough power to exhaust all odors. If it is furred in, difficult cleaning of the top surfaces of the hood and pipes is eliminated. Removable, easily washed filters facilitate maximum sanitation. A further boon to odorless kitchens is equipment mounted on legs, which can be easily cleaned and which allows air circulation along the floor. Equipment which stands away from the walls and the edges of which are rolled smooth but not closed prevents the accumulation of dirt and insects.

Well-defined, open aisles are essen-

KITCHEN



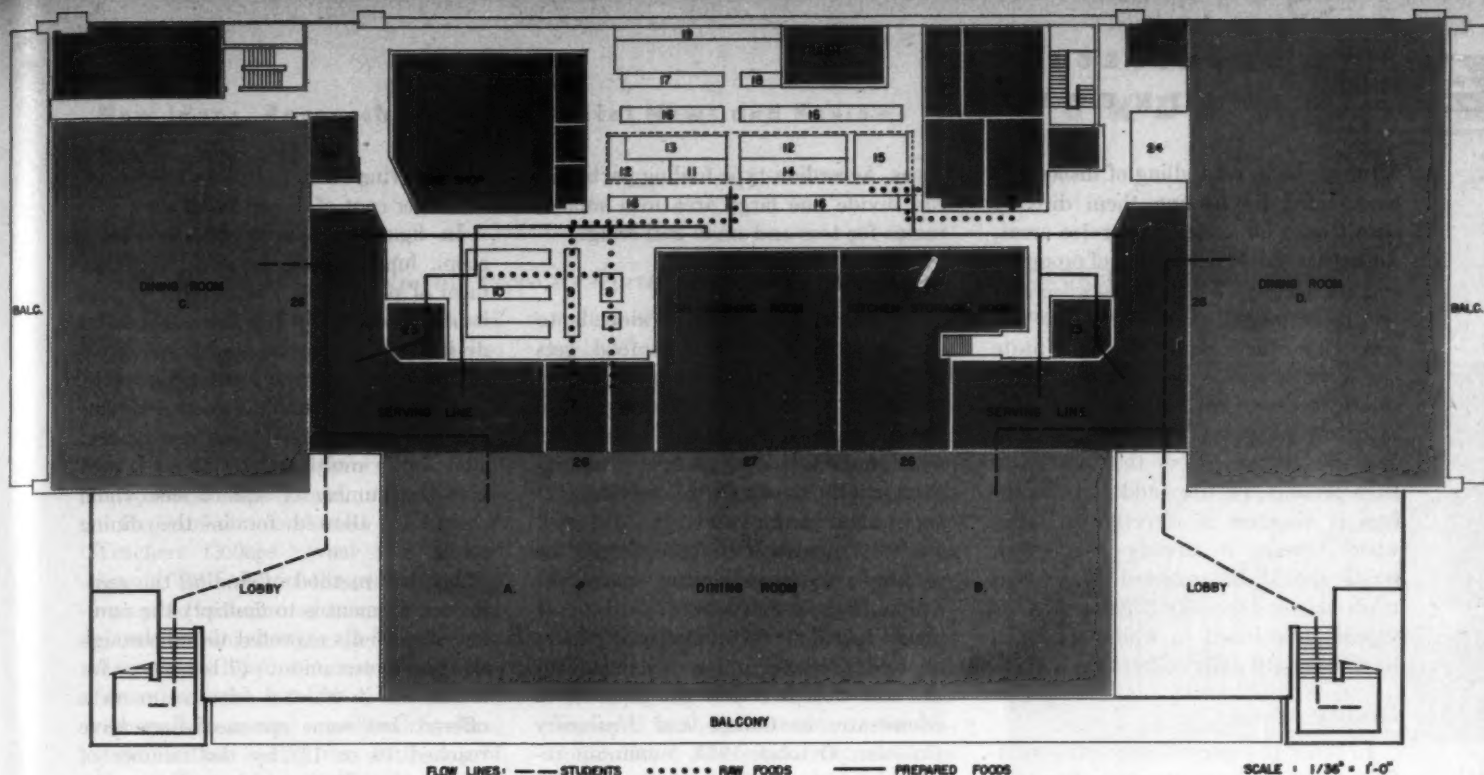
Vegetable and potato preparation area in South Quadrangle, University of Michigan. Kettles, steam cookers in background; ovens left. Air diffusers in ceiling



Closer view of kettles and steam cookers shows removable drains in stainless steel gutter and powerful furred-in exhaust hood above



Ranges, grills and fryers are in one line behind ovens, also under exhaust hood. Tile floor is well supplied with drains



tial in a food preparation area to maintain unobstructed traffic from one unit to another. Wheeled carts and equipment are moved easily if all floors are flush. A tile floor well equipped with drains has been found to be most satisfactory to meet sanitation requirements.

Food Serving Area

A food serving area, whether for cafeteria or table service, is most productive if it is supplied from outside, so that there is no need for either carts or personnel to enter. The medium most effective here is the "pass-through" compartment, located in the wall between the service area and the kitchen. Warm food is passed through a food warmer to the serving line, and salads and fruits are passed through refrigerated compartments. As the serv-

ing line needs replenishing, counter servers re-stock from the wall compartments, which are, in turn, restocked from the other side by kitchen attendants. Warming tables, either steam or electric and deep enough for flexibility of fractional pans, keep foods warm while they are on the counter. Spring-loaded dispensers supply dinner plates at working height for serving. Tables, either refrigerated from below or supplied with crushed ice, cool salads and fruit. Even with ice, a certain amount of refrigeration is desirable, and drains are necessary. Milk and juices are displayed on crushed ice or served from dispensers. Coffee is often a serve-yourself operation. Some colleges have found that a combination of self-service and attendant service at coffee urns avoids bottlenecks in the serving line.

Dishwashing

Dishwashing is a key operation in college feeding because dishes must be kept moving so that they can be used more than once at each meal. Automatic operation becomes almost a necessity. "Cleaning rooms" should be designed so that trays of dirty dishes, glasses and silver can be delivered from each dining area to a receiving counter. A minimum of workers in the cleaning rooms can scrape plates, put dishes and glasses in respective washing machines and handle the silver. If one kitchen area provides for a number of dining halls, a central washing room is practical, with dishes carried from the separate cleaning rooms on a conveyor network. At Michigan State College a conveyor system carries dishes from cleaning rooms through the space above a hung ceiling.

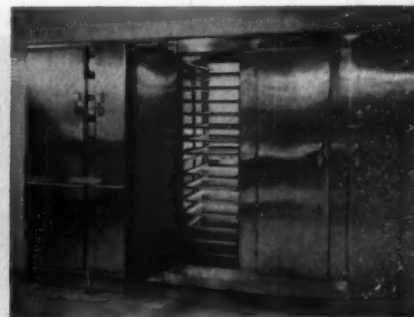
SERVING LINE



At San Francisco State College hot foods are taken from ovens and grills and placed in pans on steam table before being passed along to serving area



Warm foods are passed through warming compartments to steam table at right; salads and fruits through refrigerated compartments in South Quadrangle



Trays of salads and fruit are placed in racks of refrigerated wall compartments, The Pennsylvania State University

After washing, rehandling of dishes can be avoided by loading them directly onto trucks for return to service areas.

Garbage should be disposed of promptly and completely. Where the sewage system is adequate, automatic waste disposers are practical. At Michigan State College all waste is disposed of at point of origin. Seven waste disposers are located throughout the food preparation and cleaning areas, so that all waste from peelings, cuttings and plate scrapings is disposed of directly. In areas where sewage is already overloaded, waste should be collected in covered trash cans, and special refrigerated rooms should be planned in which they can be stored until daily collection.

Dining Areas

In order to compensate for the sacrifice of social graces resulting from the introduction of cafeteria-style eating, college authorities insist upon attractive as well as practical dining areas. In graceful surroundings, they assert, the student will maintain a certain dignity of manner even though he carries his own tray of food. With the variety of easily maintained wall and floor materials available today, a comfortable dining area can be provided without any sacrifice in practicality. Well-designed yet sturdy furniture complements an attractive interior. Diffuse lighting and an acoustically treated ceiling make the room more pleasant. If the serving line is separate from the dining area, it is not in evidence when table service is offered.

A public address system adds to the usefulness of the dining hall areas for functions such as conferences, society meetings and even dances. It can also be used to pipe in music during meal-

times. Accordion-type folding partitions can divide one large area into smaller rooms for teas and small gatherings.

Space Requirements

In planning spaces, the ideal is to arrange them so that the food gets from the point where it is prepared to the customer in the shortest possible time. Theodore Minah lists ten factors which have a bearing on space requirements: (1) standards of service; (2) time allowed for serving; (3) peak loads; (4) location of college (city or country); (5) warehousing space; (6) availability of markets; (7) extent of menu selection; (8) number of floors allotted; (9) labor union demands; (10) fire and health codes. He goes on to enumerate, in *College and University Business*, October 1954, minimum requirements to be used as a guide with which to begin:

1. Dining room: 14 sq ft per person.
Banquet hall: 10 sq ft per person.
2. Food preparation area (precooking and cooking): 45 per cent of dining room area. When only a single menu is prepared, a kitchen could be as small as 30 per cent of dining room area.
3. Storage and refrigeration: 25 per cent of dining room area (based upon the assumption that the activity will carry an inventory of about one-third of one month's requirements).
4. Dishwashing area: 20 per cent of food preparation area.
5. Baking area (if all baking is done on premises): 50 per cent of food preparation area or 15 per cent of dining room area.
6. Serving area (cafeteria line or serving counter): 20 per cent of dining room.

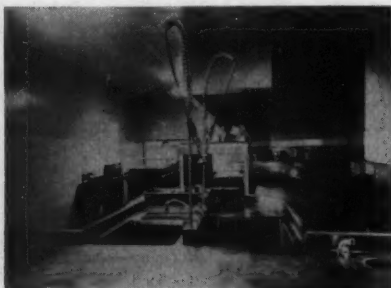
7. Receiving offices, employee restrooms: 15 per cent of dining room area.

In figuring capacity of the dining room, lunch should be considered the meal of peak load. The number of students expected to eat the noon meal divided by the anticipated turnover of each seat during the meal period ($2\frac{1}{2}$ to 3 times in 2 hr is a good average) will give the necessary seating capacity. This figure multiplied by 14 sq ft will give the number of square feet which should be allowed for in the dining room.

Another method of finding the seating requirement is to multiply the number of students expected to file through the line in one minute (7 is average for a cafeteria in which a selective menu is offered, but some one-meal lines have reached 10 or 12) by the number of minutes it will take each student to eat (20 or 30 min, counting on a smoke after the meal). Larger occupancies have to be planned in dining areas of colleges in which students are encouraged to linger after meals.

A survey of some colleges and universities with new or recently modernized feeding facilities has indicated that the architect's degree of responsibility in planning food service areas varies. In some colleges, such as the University of Texas, the staff architect did the complete job of layout and specifications with assistance from the food service staff. At other colleges, such as Northwestern University, the architect retained by the school only designed the building after actual space requirements were determined and specified by the food service personnel. However, no matter how extensive the architect's role may be, it is fast increasing in complexity and scope.

DISH WASHING



Dishes are bussed to receiving counter, scraped into disposers (left and right), pre-washed in sinks and placed in washer at San Francisco State College



Conveyor system carries dishes away for washing after pre-wash at Duke University



At University of Michigan dishes are scraped and placed in washer (rear); glasses are washed semi-automatically. Clean utensils are taken away on carts

CLASSROOM TV | *Experiments Prove Its Worth As Teaching Medium*

Television as a classroom audio-visual aid is arousing more and more interest among school administrators and educators. As a result, many architects and engineers are planning new buildings with provision to include or add a television distribution system.

Experiments conducted at Chicago Teachers College reveal that closed-circuit TV used in the classroom has many advantages over centralized or classroom film showing. It brings to the classroom "live" demonstrations, performances and lectures from internal camera cable setups as well as from local stations, thus saving the setting up of film equipment for individual classrooms and the need for students to move to a main projection room.

According to officials of the Jerrold Electronics Corp., systems can be in-

stalled with little inconvenience and cost. Many schools have been designed with extra conduit capacity or with easily accessible shafts and ducts. Amplifiers can be used to receive signals from antennas, one for each channel, and boost signal strength to desired levels for distribution throughout the building.

Closed circuit TV is being used as a standard teaching medium in Army classrooms at Fort Monmouth, N. J., and will be installed in the Case School of Applied Science in Cleveland. It also has application in hospitals and was displayed for hotel interests at the National Hotel Exposition. Signal Corps teachers at Fort Monmouth claim that TV teaching is better than movies because ventilation is better and rooms are not darkened, so students stay awake and can take notes.

DRIVE-IN BANK | *Picture Window And Wind-proof Deposit Box Used*

The latest in "drive-in" banking utilizes a picture window and an automatic "wind-proof" deposit receptacle to cut a motorist's transaction time to a minimum and to eliminate parking problems.

The customer drives up to the window of bullet-proof glass framed in stainless steel and speaks to the teller through a two-way speaker system. The teller's finger-tip pressure on a pushbutton electrically controls the wind-proof deposit receptacle, which moves from the window to within easy reach of the driver. If the teller does not press the "return" button within 15 sec, the receptacle will automatically retract. The entire transaction is within view of the customer.

The new unit, styled by industrial designer Henry Dreyfuss for the Mosler Safe Co., was introduced at the American Bankers Association Convention. It can be clamped into place quickly by means of removable rear flanges.

AIR CONDITIONING for Hospitals | *Specified in Defense Dept. Directive*

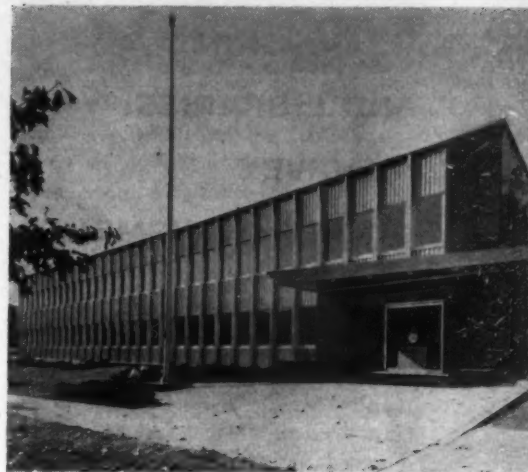
A directive setting forth the conditions under which air conditioning may be provided for permanent and semi-permanent hospitals and other medical facilities has been issued by the Defense Department. The directive specifies that consideration be given to all design factors, such as siting and the relative values of insulation, shading, size of glass areas and double-glazing, to establish an optimum balance between costs of these details and savings anticipated from installation of the air conditioning system. The order is applicable to all new construction, and may apply to major alterations in existing structures to an extent authorized by the Secretary of Defense.

HHFA | *Two Research Papers*

Results of two comprehensive studies made by the Housing and Home Finance Agency have been published in two research papers:

[*The Thermal Insulating Value of Air-spaces*, Housing Research Paper 32. Housing and Home Finance Agency. U. S. Government Printing Office (Washington 25, D. C.) 32 pp, illus. 25¢.

Shrinkage Characteristics of Concrete Masonry Walls, Housing Research Paper 34. Housing and Home Finance Agency. U. S. Government Printing Office (Washington 25, D. C.) 60 pp, illus. 40¢.

COLORLED ALUMINUM PANELS | *Impregnated Electrochemically*

Aluminum panels in which color has been impregnated by an electrochemical process cover the front and rear walls of a new two-story sales office of the Aluminum Company of America in Cincinnati.

The extruded, interlocking panels, gold on the front elevation and blue on the rear, are expected to start a new trend in commercial architecture, say Alcoa officials, since they do not require exterior maintenance, nor will their integral color chip, peel or rust. Additional shades, including gray, brown and yellow, are available, and others are being developed.

The panels measure 4 ft in width and range from 8 ft 5¼ in. to 17 ft 8 in. in length, many including one or two aluminum windows. They were secured to the lightweight steel frame by bolts and spaced between natural finish aluminum mullions. The entire wall thickness, including aluminum exterior, 1½-in.-thick fiberglass back-up wall and interior finish, measures only 6 in. Aluminum enclosed windows pivot in mechanically operated frames for inside cleaning.

The ends of the 134- by 51-ft building are of dark granite, with marquees faced with colored aluminum sheet front and rear. All offices face outside. Flexibility of design will permit the addition of a third floor with a minimum of alteration. The building was designed by Paul Schell, Pittsburgh architect. General Bronze Corp. fabricated the aluminum walls, which were colored by the Stolle Corp.

(Roundup continued on page 188)

PRODUCT REPORTS

Materials

Equipment

Furnishings

Services

GYMNASIUMS AND LIBRARIES:

A SURVEY OF NEW EQUIPMENT

Gymnasiums and libraries have taken on a "new look" — and a new meaning. Today they are vital parts of the community, whether it be a college campus or a town or village, and as such are designed for maximum usefulness and eye-appeal. Equipment has become so important and such an integral part of the interior that some manufacturers offer consulting services to advise on the technical aspects of laying out the areas.

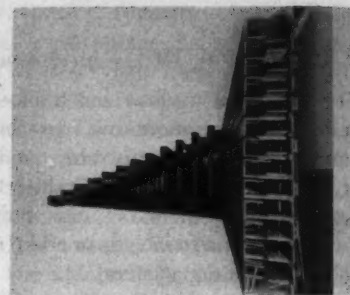
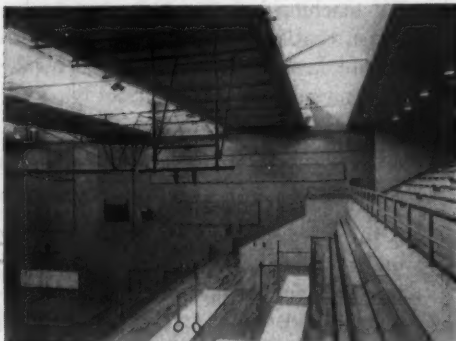
Gymnasiums are used not only for physical education and team practice, but also for competitions between college, school, industrial and club teams. Space becomes an important consideration in gymnasiums with such varied activities, and here rolling, or folding, bleachers fulfill every requirement. Basketball backboards can also be folded up and away. For important games almost every gym of any size is equipped with an electric scoreboard.

Libraries, which used to be dreary and uninviting, today are community centers. Brightness and cheery colors entice young and old to come in and browse around. Books are stacked practically and are handled easily. Records, tape recordings and films are often available in well-catalogued systems. In many libraries special rooms are planned, and so suitable furniture is necessary, for children's programs, group meetings and special readings. Study areas are quiet and well-lighted.

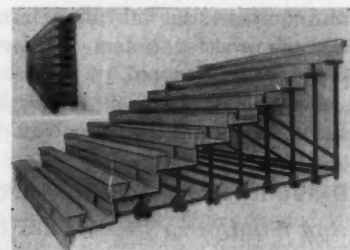
On these pages ARCHITECTURAL RECORD presents a survey of some of the newest equipment for gymnasiums and libraries. More gymnasium equipment starts on page 214, and more library equipment on page 200.



Installations of Medart gymnasium equipment show Telescopic Gym Seats closed up in a one-level gym (above) and partly open on the balcony of a three-level gym (below). The two stands to the left of the folding partition (above) are movable. Basketball backboards, except those that are wall-braced, can be swung up when necessary. Note gymnastic equipment supported from overhead. Electric scoreboard features automatic timing, pushbutton scoring. Fred Medart Products Inc., 3535 De Kalb St., St. Louis 18, Mo.



Wayne Rolling Gymstands have wheels that travel in parallel paths instead of the same plane to prevent grooving of gym floor. Standard wall-attached models and recessed models are made. Wayne Iron Works, Wayne, Pa.



Hussey "Roll-Out" Gym Seats are closed in to prevent litter; forward plate is inverted for feet. Hussey Mfg. Co., Inc., No. Berwick, Me.



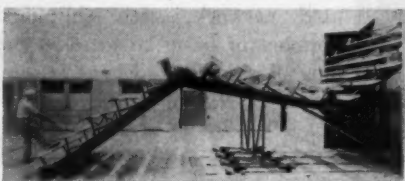
The Catawba College Library in Salisbury, N. C. (John Hartledge Associates, Architects) is bright and airy. Round and rectangular tables are apronless and have adjustable glides for leveling on uneven floors. Book shelves are supplemented by feature book tables, dictionary stand and reference book study tables (background). Close-up of front and back of charge-out desk (left) shows chute for book returns. Books are dropped through chute into book truck with a mechanical platform that gradually descends as books pile up. Myrtle Desk Co., High Point, N. C.



BLEACHERS are one of the most important elements in a gym in which spectator sports are scheduled. Stands which can be pushed back against the wall when not in use are fairly standard. Most of them are basically the same, with special features offered by different manufacturers. Many are available with end panels, end rails, aisle treads and scorers' tables. Loads are important; an average live load figure is 120 lb per linear foot, and this load is usually taken by the supports to the floor rather than the wall. Adequate bracing under the stands prevents side sway. Standard length of sections is 16 ft. Depth of stands, from seat to seat, is usually about 22 in.; rise from seat to seat is about 9 in.; and rise from footboard to seat is about 16 or 18 in. Locks ensure stability of stands when they are open, either fully or partially, or closed. Cleaning is usually easy, since the bottom plate of most stands can be lifted while they are closed. Some points to be considered in specifying bleachers are (1) safety, (2) comfort, (3) adaptability, (4) space requirements, (5) visibility, (6) design and construction, (7) operation, (8) maintenance, (9) appearance, (10) exclusive features, (11) service offered and (12) insurance rates.



Universal Roll-A-Way Gymnasium Stands are installed on balcony and main floor of this gym. Universal reference table gives room and basketball court dimensions corresponding to number of seats desired. Universal Bleacher Co., Champaign, Ill.



Amweld Easi-Fold Bleachers come in single or double folds, have floor plates to protect gym floor. The American Welding & Manufacturing Co., Warren, Ohio.

La Salle Electrical Gym Seats are operated by pushbutton. Basketball backstop is by La Salle also. La Salle Engineering Co., 139th and Antioch Rd., Olathe, Kan.



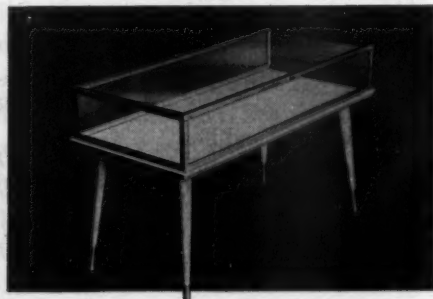
Leavitt Telescoping Bleachers feature a wheel movement under the foot and seat boards as well as at floor level. Leavitt Bleacher Co., Urbana, Ill.



Long Island Jack Knife Bleachers, supported by steel bearing plates, fold away. Long Island Bleacher Co., Inc., 33-35 Ninth St., Long Island City 6, N. Y.



Shelving Inserts can be attached to aluminum clips stripped inside both high- and medium-height shelves. In the display shown above two bulletin boards and magazine and newspaper racks have been inserted in the shelves. The exhibit case is 61 in. long by 29 in. wide by 36 in. high, with 9-in.-high case. John E. Sjoström Co., 1717 N. Tenth St., Philadelphia 22, Pa.



Conference-type table is comfortable and roomy for modern library. Herman Miller Furniture Co., Zeeland, Mich.

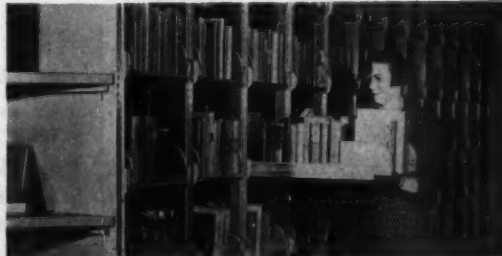
Book Charging Recorder automatically prints date of withdrawal and a transaction number on a loan slip, thus saving the librarian much writing and accounting. International Business Machines Corp., 590 Madison Ave., New York 22, N. Y.

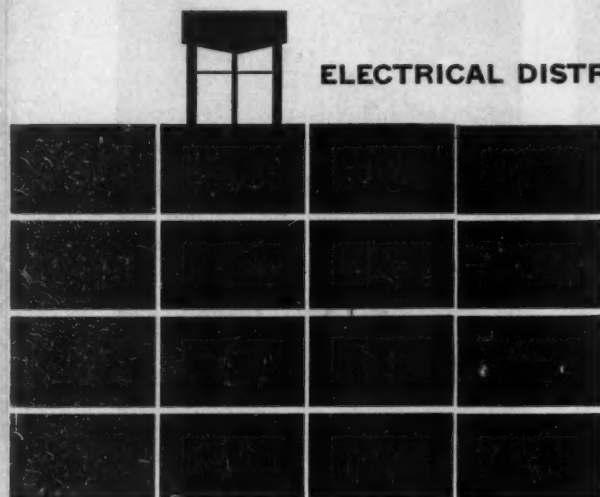


Card Catalog Cabinet has 60 interchangeable drawers with capacity for 72,000 medium-weight cards. Three maple shelves in the middle are convenient for writing or as drawer rests. Gaylord Bros., Inc., 155 Gifford St., Syracuse 1, N. Y.



Compo Stacks slide on nylon-tired ball bearings to provide extra capacity in a space made easily accessible. Stacks can be adjusted vertically for different book sizes. Hamilton Mfg. Co., Two Rivers, Wis.





ELECTRICAL DISTRIBUTION SYSTEMS

• **Cornerstone — or Tombstone** describes the basic elements of electrical distribution systems for commercial buildings. Service continuity, good performance, safety and flexibility are stressed. Four typical systems are presented: low-voltage radial, high-voltage radial, spot network and distributed network, with simplified sketches of basic layouts. 20 pp, illus. *Westinghouse Electric Corp., Box 2099, Pittsburgh 30, Pa.**

STONES, BRICK AND TILE

• **A Portfolio of Detail Plates and General Information** on Indiana Limestone has been compiled by the *Indiana Limestone Institute, P. O. Box 471, Bedford, Ind.**

• **Brick and Tile Walls Reduce Air Conditioning Loads**, 8 pp, is available from *Structural Clay Products Institute, 1520 18th St. N.W., Washington 6, D. C.**

• Twelve plans of granite entrance features, presented in file form, and also a four-page folder giving structural details and orthographic cut-away illustrations of standard and stock granite sills are available from the *Cold Spring Granite Co., Cold Spring, Minn.**

• **Quarry Tile Data File** includes specifications and photos of typical installations. *Summitville Tiles, Inc., Summitville, Ohio.**

WINDOWS

• **Bulletin No. A-531** contains details, engineering data and design characteristics of tubular sections for mullion construction. **Bulletin A-532** illustrates the Kawneer 10-350 Sash and includes installation instructions. **Bulletin A-533** gives details, engineering data and design characteristics of #16-1050 heavy duty stiffener for division bars. *The Kawneer Co., Niles, Mich.**

• **Window Planning Principles** gives information on the selection and placement of windows from the standpoints of daylight, ventilation, view and appearance. *University of Illinois Small Homes Council, Urbana-Champaign, Ill.*

STEEL

• **Why Structural Steel Is Best for Schools** illustrates how steel framing has been successfully used in different types of school structures and in various geographical locations where physical requirements differ. *American Institute of Steel Construction, 101 Park Ave., New York 17, N. Y.*

• **A Guide to Future Uses of Stainless Steel in Architecture and Building** describes the composition and characteristics of stainless steel as well as suggesting its uses and applications of stainless steel tubing. *Crucible Steel Co. of America, Henry W. Oliver Bldg., Pittsburgh 22, Pa.*

• A 20-page booklet describes and illustrates the uses of light steel structural beams for floor and roof construction as well as for truck and trailer frames, ship building and grandstand construction. *Jones & Laughlin Steel Corp., 3 Gateway Center, Pittsburgh 30, Pa.**

PORCELAIN ON STEEL

• An illustrated brochure describing the factors involved in architectural porcelain-on-steel construction may be obtained without charge from the *Erveen Corp., 4000 W. Ridge Rd., Erie, Pa.*

LITERATURE INDEX

• **Classified Index of Literature** (Bulletin 100-C) lists all current Honeywell Industrial Division literature. 12 pp, illus. *Minneapolis-Honeywell Regulator Co., Industrial Div., Wayne and Windrim Aves., Philadelphia 44, Pa.**

AUTOMATIC EQUIPMENT

• **The Electronic Control Story** explains the fundamentals of electronic temperature controls and their application. 24 pp, illus. *Barber-Colman Co., Rockford, Ill.**

• **Modulite** pulsed-beam photo-electric relays for industrial use are described in a 4-page illustrated booklet published by *Electronic Control Corp., 1573 E. Forest Ave., Detroit 7, Mich.*

• **More Dollars from Less Space** tells about the Alden Work Center System. 32 pp, illus. *Alden Systems Co., Alden Research Center, Westboro, Mass.*

• The new low-voltage wiring system for the central and remote control of multiple circuits is described and illustrated in a bulletin available from *The Bryant Electric Co., Dept. L-263, Bridgeport 2, Conn.**

• **Just As the Doctor Looks Inside** lists advantages of a business telephone system. *Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.*

PRODUCT BULLETIN

• **Technical Bulletin Number 70** gives manufacturer's technical information on 37 products. *The Producer's Council Inc., 1001 15th St. N. W., Washington 5, D. C.*

WALL AND FLOOR AGGREGATES

• A 12-page illustrated booklet includes a description of the physical characteristics, design data, construction features and details of Waylite Aggregates for walls and floors. *The Waylite Co., P. O. Box 30, Bethlehem, Pa.**

FIBERGLASS PANELS

• Fiberglass-reinforced translucent structural panels are illustrated in a folder released by *Resolite Corp., Zellenople, Pa.**

DRAFTING ROOM EQUIPMENT

• A 32-page illustrated catalog of modern drafting room equipment has been released by the *Hamilton Mfg. Co., Two Rivers, Wis.*

(Continued on page 228)

*Other product information in *Sweet's Architectural File, 1954*



Design fundamentals of the **ALL-AIR HIGH VELOCITY** distribution system

By F. J. KURTH

Vice President of Engineering

Anemostat Corporation of America

A national survey reveals that today, more than ever, engineers are studying, learning and using high velocity-high temperature differential air distribution. Here is a brief discussion of the advantages of the all-air high velocity system over conventional and mixed cycle (air and water) systems.

1. No Coils — No Clogging — No Odor—There are no coils in the all-air high velocity units. Damp coils collect lint and emit dank odors, and the coils must be cleaned periodically.

2. No Individual Fans — Filters — or Electric Motors — The all-air units operate entirely with air which is processed in the main equipment rooms. The 100% induction units utilize the kinetic energy of the high velocity air to mix primary air with the room air.

3. No Conflict of Trades—The all-air units are installed by the sheet metal trades only.

4. More Effective Use of Outside Air in Spring and Fall—More primary air is delivered to the all-air units than to induction coil units. This allows the engineers to operate in the Spring and Fall on outside air and thereby save refrigeration.

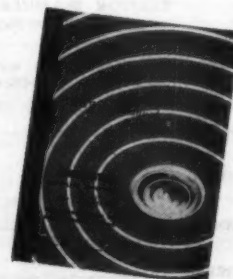
All-air high velocity units offer scientific air diffusion. Each high velocity unit is provided with an aspirating or high induction type air diffuser which is scientifically designed to diffuse air without drafts. Each unit can be pressure balanced by an easy-to-operate balancing device and a calibrated orifice. In fact, the Anemostat all-air high velocity system can be balanced more accurately than other systems and in less than half the time required to balance a low velocity system.

High velocity units require practically no maintenance after installation. They have valves of the non-corrosive, die-cast, "rocket-socket" type, which are patented by the Anemostat Corporation of America. All units can be adapted for the following variations:

1. Single duct for zone control or individual thermostatic or manual remote control.
2. Dual duct for thermostatic control or any other type of control.
3. Single or dual duct units with the diffuser fastened to the unit, or remote from the attenuating unit.
4. Under-the-window, sidewall or ceiling type installations.
5. Can be provided with standard aspirating diffusers or 100% induction type diffusers.
6. Induction type units handle temperature differentials up to 33° below ambient.

Selection Manual Contains Data on High Velocity Units

New Selection Manual 50 gives extensive selection and application data on high velocity all-air distribution systems. Write on your business letterhead for Selection Manual 50 to the Anemostat Corporation of America, 10 E. 39 Street, New York 16, New York.



REZNOR'S new SECTIONAL Duct Furnace

Now you can design the *ideal* system for every duct heating situation — and be sure of the equipment to make it work. Reznor's sectionalized assembly (a completely new concept in duct heating equipment) means that installation problems no longer keep you from planning capacities up into the millions.

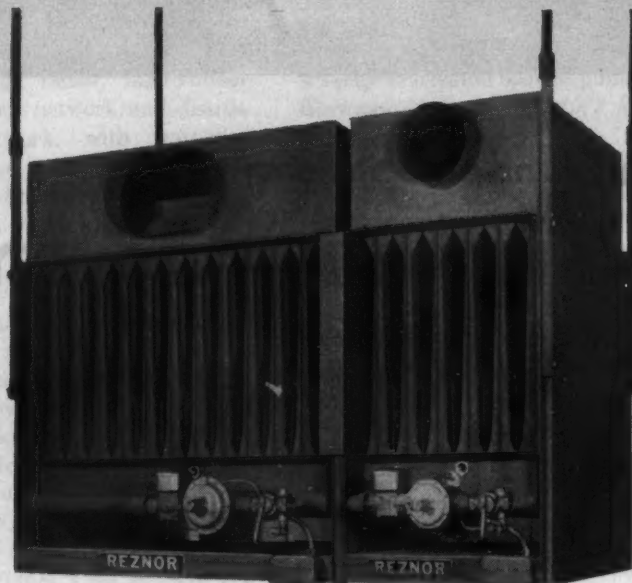
To provide a system of maximum efficiency at lowest cost, install one of these new furnaces as the heat exchanger with components for air moving, cooling, cleaning and humidification chosen to meet the requirements of the specific application.

New Reznor series DS sectional duct furnaces are assembled on the job out of four basic sections: 150,000 - 200,000 - 250,000 - 300,000 BTU. Capacities range upward in steps of 50,000 BTU from 150,000 to several million BTU. And because the new units are designed to handle large volumes of air with minimum pressure loss, capacities in excess of 2,000,000 BTU are often completely practical.

In addition to the revolutionary DS series, Reznor engineers have also perfected a completely new design for a series of small capacity duct furnaces. Though differing in construction from the DS series, the new series D models offer the same advantages of high efficiency, compact design and light weight. And they have the same adaptability to use in all custom engineered systems for comfort or process heating.

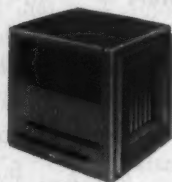
Suggestions on how to take advantage of Reznor's new concept — sectionalized assembly — plus complete details on construction and performance of the new units are included in two new bulletins. Because a Reznor duct furnace may be the key to the solution of any particularly difficult problem, you need to have these bulletins in your files. Use the coupon below to send for your free copies today.

- Capacities to over 2,000,000 BTU
- Sectionalized to simplify installation



SERIES DS — 150,000 to several million BTU

Each section is complete with controls and built-in draft diverter. Sections can be operated independently to meet less than peak load requirements. Burners are installed in a drawer which slides out the front of the unit to provide easy access for inspection and cleaning. All controls are attached to the burner drawer. Sections may be installed side-by-side in a single bank or back-to-back in a double bank. View above shows the 450,000 BTU model (one 150,000 BTU and one 300,000 BTU section assembled side-by-side).



**SERIES D —
50,000 to 125,000 BTU**

Reznor series "D" duct furnaces are designed primarily for residential and small commercial applications. Four sizes — 50, 75, 100 and 125,000 BTU. Handsome steel cabinets have burner access and controls completely enclosed on one side.

REZNOR MANUFACTURING COMPANY
62 Union Street, Mercer, Pa.

Please send me my free copies of Bulletins
B-55-D and B-55-DS on your new duct furnaces.

NAME _____
TITLE _____
COMPANY _____
STREET _____
CITY _____ ZONE _____ STATE _____

REZNOR
THE WORLD'S LARGEST-SELLING
GAS UNIT **HEATERS**

ENGINEERED WOOD DESIGN-4: PLANK AND BEAM CONSTRUCTION

By William J. LeMessurier and Albert G. H. Dietz

Plank and Beam Tables

These sheets present tabular data and details to facilitate the design of plank and beam roofs and floors for houses. Three different ways of using the planks are possible (see figure below), but the type which is continuous over two spans will give greatest span lengths. Simple spans or semi-continuous spans with alternately staggered joints may be used in special cases.

The lumber chosen for the planks must have minimum strengths as indicated, but satisfactory appearance may require lumber of higher grade. 2-in. nominal planking (1 3/8 in. actual size) generally will give more economical designs than 3 in. (2 5/8 in. actual size), which should be used only for special cases.

The table on this page gives the plank spans possible (same as beam spacing) for three roof loads and for the standard floor load of 40 lb

per sq ft. Three wood groups are included for wide selection.

Altogether there are 12 beam tables which give considerable freedom in design. For each roof or floor load and each of three different wood groups, three beam choices may be made. The first beam listed uses the least lumber; the second beam gives the most headroom; the third beam is built-up of two pieces to provide a concealed space for electrical conduit.

Basis For Tables

The plank tables are based on ordinary design formulas for bending and deflection. For roofs, total deflection is limited to 1/240 of the span, and the load is considered uniformly distributed. For floors, live load deflection is limited to 1/360 of the span, and total deflection to 1/300. Floor live loads are assumed on one span only for continuous spans when this condition

is more critical than fully uniform loads.

Beam tables are based on moments, deflections and shears computed for simple spans. Roof deflections are limited to 1/240, and floor deflections are limited to 1/300 of the span. Maximum shearing stresses were computed by the formula:

$$H = \frac{3wSL}{4bh} \left(1 - \frac{h}{6L} \right)$$

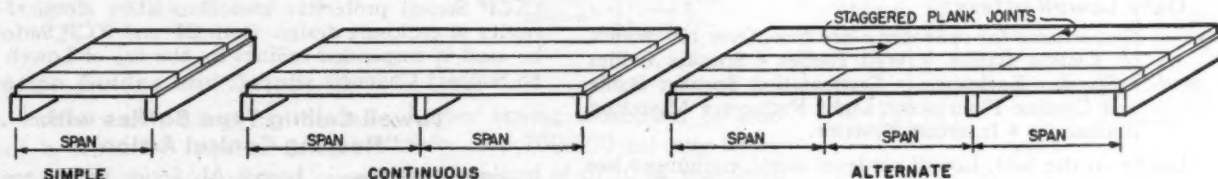
where H = shearing stress in lb per sq in., w = load in lb per sq ft. S = spacing in ft, L = span in ft, and b and h = width and depth of the beam, respectively, in in. This method is recommended by the National Lumber Manufacturers Association. In no case should beam be notched without special investigation of shearing stresses.

Sample Design

A typical design for the roof of a house measuring 28 by 48 ft with a 30 lb per sq ft live load might be made as follows:

(Text continued on page 183)

Planking continuous over two spans gives greatest span lengths.
Next in order is alternate planking method followed by simple span



MAXIMUM PLANK SPANS FOR VARIOUS FLOOR AND ROOF LOADS
1 3/8 in. and 2 5/8 in. planking (actual dimensions)

TYPE OF WOOD	GRADE	MODULUS OF ELASTICITY, PSI	MAX. FIBER STRESS, PSI	ROOF						FLOOR		
				LIVE LOAD—20 Lb/Sq Ft			LIVE LOAD—30 Lb/Sq Ft			LIVE LOAD—40 Lb/Sq Ft		
				SIMPLE	CONT.	ALT.	SIMPLE	CONT.	ALT.	SIMPLE	CONT.	ALT.
HEMLOCK	UTILITY STRUCTURAL	1,100,000	950	6'-8"	8'-11"	7'-6"	6'-2"	8'-3"	6'-11"	5'-7"	7'-8"	6'-5"
				10'-9"	14'-6"	12'-1"	9'-11"	13'-4"	11'-1"	9'-3"	12'-5"	10'-5"
CYPRESS	1300f											
PINE, NORWAY	PRIME STRUCTURAL	1,200,000	1200	6'-10"	9'-3"	7'-8"	6'-4"	8'-6"	7'-1"	5'-11"	7'-11"	6'-7"
REDWOOD, CALIF.	HEART STRUCTURAL			11'-1"	14'-11"	12'-5"	10'-3"	13'-8"	11'-5"	9'-7"	12'-10"	10'-8"
SPRUCE, EASTERN	STRUCTURAL, 1200f											
DOUGLAS FIR,	COAST REGION 1100f, No. 2											
PINE, SOUTHERN	No. 2	1,600,000	1100	7'-7"	10'-2"	8'-6"	6'-11"	9'-4"	7'-10"	6'-6"	8'-9"	7'-3"
PINE, SOUTHERN	No. 2 LONGLEAF			12'-3"	16'-5"	13'-9"	11'-3"	15'-1"	12'-7"	10'-6"	14'-1"	11'-9"

Note: First rows for wood groups are 1 3/8" planking; second rows are 2 5/8" planking.

from **A**rchitecture to **A**coustics



LOWELL Is Preferred for Profitable Sound Installation

When you specify Lowell — the *complete* line of "ear level" sound equipment — you are recommending the line *preferred* by architect and acoustical engineer alike wherever clarity of sound reproduction is essential.

Only Lowell offers:

One source for one complete line. Over 100 models of: Ceiling Baffles • Wall Baffles • Speaker Grilles • Speaker Enclosures • Combination Speaker Baffle and Circline Fluorescent Light Fixtures • Mounting Accessories • Intercom Systems.

Leader in the field, Lowell ear-level sound equipment has proven superior for new and existing construction in more large installations such as airports, railroad stations, hospitals, schools, and factories than any other make.

Lowell Recessed Protective Speaker Enclosures

The Lowell Round Type (CP Series) protective enclosures (illustrated above) are designed for quick, labor-saving installation in wall or ceiling in *new construction* ready for plastering. Speakers are fully protected from fire, dust, falling mortar and rodents. All steel, spot welded construction — with plaster ring attached — is of 22 gauge metal, the exterior rust proofed and interior heavily

undercoated to prevent metallic resonance. Sufficient speaker back pressure relief assures high speaker efficiency. Four models in the series to accommodate speakers from 6" to 15" in size.

For *existing construction* the Lowell Round Type (XCP Series) protective enclosure offers identical superiority in enclosure design. Both CP and XCP Series may be used in suspended ceilings by the use of Lowell Type SS Support Channels.

Lowell Ceiling Type Baffles with "Floating Conical Action"



Low Ceiling Type Baffle (AL Series)

Lowell AL Series Baffles are especially designed for low ceiling areas or any area where concealment of speaker is required. Lowell "Floating Conical Action" distributes *controlled* sound uniformly throughout a full 360°. They are constructed entirely of 18 gauge aluminum. The diffusing cone is supported through rubber grommets by four 1/4" formed aluminum rods eliminating metallic resonance. Lowell Type AL Baffles are extremely attractive and are available in natural satin finish or in a variety of colored lacquer finishes.

Complete information regarding the Lowell line—**world's largest-used line of sound installation equipment**—will be sent immediately upon request.

HEARD EVERYWHERE
Lowell

MANUFACTURING COMPANY

3030 LACLEDE STATION ROAD, ST. LOUIS, MO., U.S.A.

IN CANADA: ATLAS RADIO CORP.

560 KING ST., WEST, TORONTO, CANADA



ENGINEERED WOOD DESIGN-5: PLANK AND BEAM CONSTRUCTION

By William J. LeMessurier and Albert G. H. Dietz

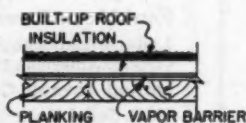
1. Eight bays at 6 ft or six bays at 8 ft could be used to frame the length of the building. With 6-ft bays, any arrangement of 1½ in. planking could be used with any wood group listed. For 8-ft bays, 1½ in. planks must be continuous over two spans. Note that other plank arrangements will not span 8 ft regardless of the wood used (table on Sheet 4).

2. For beams spaced at 8 ft on center, and with posts assumed at the centerline of the house giving two 14-ft spans, 4 x 12 beams of No. 1 Southern Pine would be most economical (Table 2, sheet 6). If shallower beams were desired, to save headroom, 6 x 10's could be used. With posts placed to give 12-ft and 16-ft spans across the width of the house, 4 x 10's and 4 x 14's respectively, could be used for these two spans.

3. With beams spaced 6 ft on center 4 x 10's of 1700f Dense No. 1 Douglas Fir, Coast Region, would span 14 ft (Table 3). 4 x 10's and 4 x 12's of No. 1 Douglas Fir, Coast Region, respectively, could be used for spans of 12 ft and 16 ft (Table 2).

Design Guides and Details

1. Insulation of a plank and beam roof is ordinarily required in cold climates. Rigid insulation laid over the planks and a vapor barrier be-

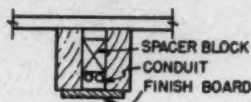


tween planks and insulation are essential where condensation may be a problem.

2. Where concentrated loads of partitions occur on plank and beam floors, special beams may be required.

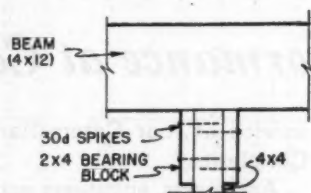
3. Provisions should be made for electrical conduit in planning the

structure. Built-up beams may be used to provide overhead conduit.



4. Careful attention should be given to wind bracing for a plank and beam house. This may be provided in the form of solid partitions and exterior walls in at least two perpendicular plans. Additional stiffness may be developed by using rigid beam to post connections.

5. Posts or columns should be proportioned to carry axial loads safely. The minimum size for a free-standing, solid post should be a 4 x 4. A 4 x 4 post, 8 ft high, with



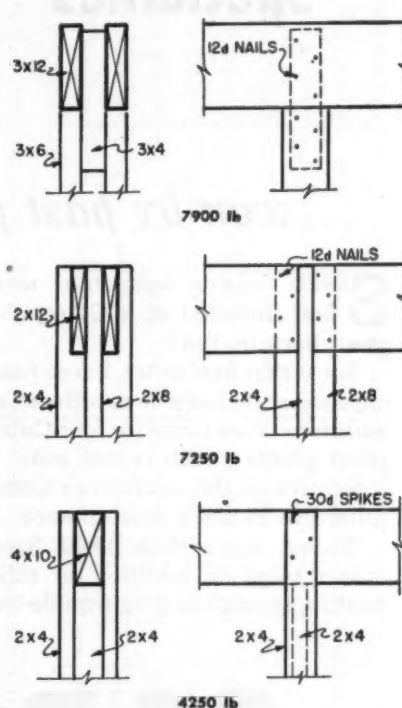
lumber having a modulus of elasticity of 1,200,000 psi may safely carry a load of 6750 lb. This would be just adequate as an interior column with 8-ft beam spacing, 16-ft beam span, and a 30 lb per sq ft live load.

The bearing stress perpendicular to the grain of a beam is also governed by the column size. A larger post may be required to control this stress unless bearing blocks are provided. Bearing stresses at the ends of beams should be limited at 300 to 450 psi depending on the grade of wood used. For example, the total load on a 4 x 4 post as limited by a beam bearing stress of 400 psi would be 5250 lb, which is less than the column capacity. This load may be increased by adding bearing blocks securely

fastened to the top of the column as shown.

It is often desirable to use built-up columns made from smaller sections to give more lightness to the design or to make a more rigid connection of columns to beams. Several possible arrangements are shown with their capacities calculated for a height of 8 ft and with wood having a modulus of elasticity of 1,200,000 psi. (For other woods the allowable load will be proportional to the modulus of elasticity.) The strengths shown assume that the elements are connected together only by nails.

Examples of built-up columns



Beam to column connections may be made in a variety of ways with built-up columns. Connections for the three columns designs are shown above. It will be noted that beam reactions are partially carried by nails in each of these cases.

6. All planks should be tongue-and-grooved or splined to distribute concentrated loads.

The most convincing stamp of user satisfaction

9 repeat orders for Sarco Heating Specialties



Engine factory of Caterpillar Tractor Co., Peoria, Ill. Architects & Engineers: Giffels & Vallet Inc., L. Rossetti Assoc., Detroit. Heating Contractor: The Stanley-Carter Co., Detroit. Sarco heating specialties also are providing trouble-free service in Caterpillar's Joliet and Decatur, Ill. and York, Pa. plants.

...won by past performance at Caterpillar Tractor Co.!

SARCO heating specialties were first installed in a Caterpillar plant back in 1947.

Since that first order, Sarco heating specialties have been ordered an *additional nine times* for four Caterpillar plants — each repeat order is indicative of the confidence Caterpillar has in Sarco performance.

Today, more than 1800 Sarco steam traps in addition to other heating specialties give trouble-free

service at four Caterpillar Tractor Co. plants.

Architects, engineers and heating contractors appreciate this kind of dependability. It assures them complete user satisfaction, protects reputations, eliminates trouble-some call-backs. Why not specify Sarco on *your* next job?

For full information on all Sarco products, write Sarco Co., Inc., Empire State Bldg., New York 1.

America's Industrial Leaders Repeatedly Order Sarco Heating Specialties

Aluminum Co. of America
Bethlehem Steel Co.
Caterpillar Tractor Co.
Ford Motor Company
Lederle Laboratories
(Div. of American Cyanamid Co.)
United Aircraft Corporation
U. S. Steel Company
Western Electric Company

2102-B

SARCO *saves steam*

STEAM TRAPS • TEMPERATURE CONTROLLERS • HEATING SPECIALTIES



Radiator
Valves • Traps



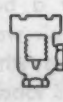
Strainers



Float-
Thermostatic
Traps



Camlift Bucket
Steam Traps



Thermostatic
Traps



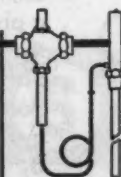
Water
Blenders



Air
Eliminators



Dial
Thermometers



Self-Operated
Temp. Reg.

ENGINEERED WOOD DESIGN-6: PLANK AND BEAM CONSTRUCTION

By William J. LeMessurier and Albert G. H. Dietz

BEAM DESIGN TABLES

Roofs, 30 lb/sq ft live load

(To be continued)

Key to tables
Columns A—Maximum economy
Columns B—Minimum depth
Columns C—Built-up beams

TABLE 1

Design Conditions:

Live load 30 lb/sq ft

Dead load 15 lb/sq ft

Fiber stress 1200 lb/sq in.

Shear 95 lb/sq in.

Mod. of elasticity 1,200,000

Woods Meeting Design

Conditions:

Cypress, 1300f grade

Redwood, Heart Structural

Spruce, Eastern, 1200f

Structural Grade

Spacing
Span

8'-0"

9'-0"

10'-0"

11'-0"

12'-0"

14'-0"

16'-0"

18'-0"

20'-0"

4'-0"

4'-6"

5'-0"

5'-6"

6'-0"

6'-6"

7'-0"

7'-6"

8'-0"

8'-6"

9'-0"

9'-6"

10'-0"

8'-0"

9'-0"

10'-0"

11'-0"

12'-0"

14'-0"

16'-0"

18'-0"

20'-0"

4'-0"

4'-6"

5'-0"

5'-6"

6'-0"

6'-6"

7'-0"

7'-6"

8'-0"

8'-6"

9'-0"

9'-6"

10'-0"

8'-0"

9'-0"

10'-0"

11'-0"

12'-0"

14'-0"

16'-0"

18'-0"

20'-0"

4'-0"

4'-6"

5'-0"

5'-6"

6'-0"

6'-6"

7'-0"

7'-6"

8'-0"

8'-6"

9'-0"

9'-6"

10'-0"

8'-0"

9'-0"

10'-0"

11'-0"

12'-0"

14'-0"

16'-0"

18'-0"

20'-0"

4'-0"

4'-6"

5'-0"

5'-6"

6'-0"

6'-6"

7'-0"

7'-6"

8'-0"

8'-6"

9'-0"

9'-6"

10'-0"

TABLE 2

Design Conditions:

Live load 30 lb/sq ft

Dead load 15 lb/sq ft

Fiber stress 1450 lb/sq in.

Shear 120 lb/sq in.

Mod. of elasticity 1,600,000

Woods Meeting Design

Conditions:

Douglas Fir, Coast Region, 1450f

No. 1

Pine, Southern, No. 1

8'-0"

9'-0"

10'-0"

11'-0"

12'-0"

14'-0"

16'-0"

18'-0"

20'-0"

8'-0"

9'-0"

10'-0"

11'-0"

12'-0"

14'-0"

16'-0"

18'-0"

20'-0"

8'-0"

9'-0"

10'-0"

11'-0"

12'-0"

14'-0"

16'-0"

18'-0"

20'-0"

8'-0"

9'-0"

10'-0"

11'-0"

12'-0"

14'-0"

16'-0"

18'-0"

20'-0"

8'-0"

9'-0"

10'-0"

11'-0"

12'-0"

14'-0"

16'-0"

18'-0"

20'-0"

TABLE 3

Design Conditions:

Live load 30 lb/sq ft

Dead load 15 lb/sq ft

Fiber stress 1700 lb/sq in.

Shear 145 lb/sq in.

Mod. of elasticity 1,600,000

Woods Meeting Design

Conditions:

Douglas Fir, Coast Region, 1700f

No. 1 Dense

Pine, Southern, No. 1 Longleaf

8'-0"

9'-0"

10'-0"

11'-0"

12'-0"

14'-0"

16'-0"

18'-0"

20'-0"

8'-0"

9'-0"

10'-0"

11'-0"

12'-0"

14'-0"

16'-0"

18'-0"

20'-0"

8'-0"

9'-0"

10'-0"

11'-0"

12'-0"

14'-0"

16'-0"

18'-0"

20'-0"

8'-0"

9'-0"

10'-0"

11'-0"

12'-0"

14'-0"

16'-0"

18'-0"

20'-0"

8'-0"

9'-0"

10'-0"

11'-0"

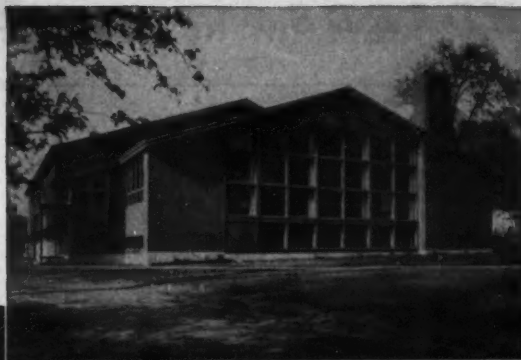
12'-0"

14'-0"

16'-0"

18'-0"

20'-0"



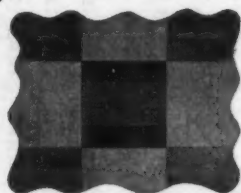
pride of the community!

Gentle Community Building, Houlton, Maine. Alonzo J. Harriman, Inc., Auburn, Maine, Architects and Engineers



the finest floor that grows

foot-friendly NORTHERN HARD MAPLE



Cost is surprisingly low for the ultimate in luxury flooring—in blocks and modern patterned designs as well as the more conventional strip form. Readily laid in mastic, over concrete or softwood sub-flooring.

● The air of hospitality that beckons the townspeople of Houlton into their new Community House is repeated with cordial emphasis within. The warm, "foot-friendly" comfort of resilient, Northern Hard Maple Flooring extends its own invitation. Activities room, dance lounge and gymnasium-auditorium—all are maple-floored, for enduring, low-cost "housekeeping" and maintenance. We believe you'll agree, the building's low \$7.75 unit cost (\$123,750 for its 10,000 square feet) bespeaks to some degree the economy of "the finest floor that grows." Write for latest literature, or consult Sweet's (Arch. 12K-MA).

MAPLE FLOORING MANUFACTURERS ASSOCIATION

Suite 550, Pure Oil Bldg., 35 East Wacker Drive, Chicago 1, Ill.

FLOOR WITH **NORTHERN** HARD MAPLE
BEECH AND BIRCH



APARTMENTS



FACTORIES

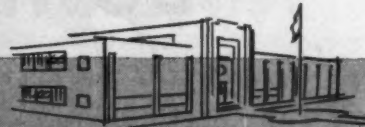


RESTAURANTS



MOTELS

new!



SCHOOLS



HOUSES



LAUNDRIES



Cut-a-way view of concave type tank suitable for horizontal or vertical mounting.

● Here is a *glass-lined*, large volume water storage tank to meet your demands for the clean, rust-free storage of cold and hot water for your commercial or industrial jobs. Where rust and corrosion are annoying problems and where long tank life is desired these *new* glass-lined water tanks are the answer . . . and at reasonable cost.

The inside of this new tank, especially designed for the storage of water, is completely coated with special A. O. Smith ceramic glass, permanently fused to the steel. Stored water will stay as pure and clean as your water supply, and rust free, too, because the mirror-smooth, glass-surfaced steel tank can't rust or corrode under any water conditions. Ranging in size from 100 to 1,000 gallons, or larger on special orders . . . designed for horizontal or vertical mounting in the smaller sizes for installation flexibility . . . available for use in gas-fired Burkay hot water systems . . . or fitted with coils for steam systems . . . you have a proved line of water storage tanks to choose from.

See your nearest A. O. Smith distributor for full details about this quality line of Permaglas water storage tanks.

Permaglas®

**LARGE
VOLUME
WATER
STORAGE
TANK**

for restaurants, plants, motels,
laundries, apartments, homes,
schools — or any place where
water rusts or corrodes tanks.

Through research  . . . a better way

A.O. Smith
CORPORATION

PERMAGLAS DIVISION • KANKAKEE, ILLINOIS

write

Write for the new Permaglas Large Volume Water Storage Tank Specification Sheet . . .

TO: A. O. Smith Corporation, Kankakee, Illinois, ARCH R, 1-55.
Gentlemen: Please send me the above mentioned literature.

Name Title
Company
Address
City Zone State

THE REAL LOW-DOWN ON DOWNLIGHTING

Here are the facts...

A Comparative Study of DOWNLIGHTING DEVICES

THE SKYLIKE *Silver-spot* LINE

Provides these outstanding features

1/
THIRD

LAMP COST...

Lamp replacement costs for most popular types of downlights using reflectorized lamps will approximate three times the cost of lamp replacements for Silver-spot and Silver-dot units.

2/
THIRDS

POWER COST...

Since many of the commonly used downlight devices employ 150 watt lamps, the 100 watt Silver-spot or Silver-dot units will cost only two thirds as much to operate.

3/
TIMES

LIGHT OUTPUT...

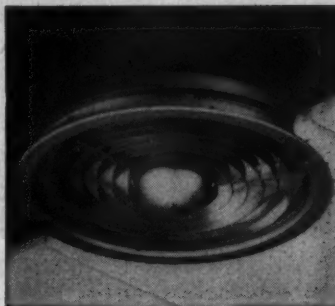
Performance of downlights varies greatly with design and light distribution. In general Silver-spot and Silver-dot produce more effective footcandles within the designed beam. This increase in illumination averages about three times that afforded by other devices but in some cases exceeds five times the illumination within specified zonal limits.

THIS COMPLETE
REPORT ON
DOWNLIGHTING
DEVICES
yours for the asking

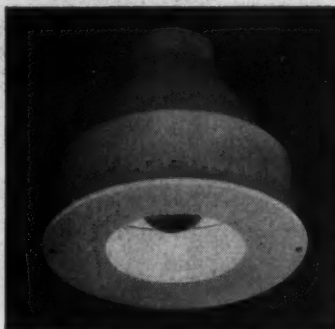
Proof of these facts is definitely established in a comprehensive study just completed. Charts of various types of downlighting devices are based on data taken from photometric tests conducted by Electrical Testing Laboratories, Inc., or from published photometric data. To obtain this report just write to...

Skylike LIGHTING, INC.

A SILVRAY ASSOCIATED COMPANY
BOUND BROOK • NEW JERSEY



SILVER-SPOT



SILVER-DOT 113



SILVER-DOT 110

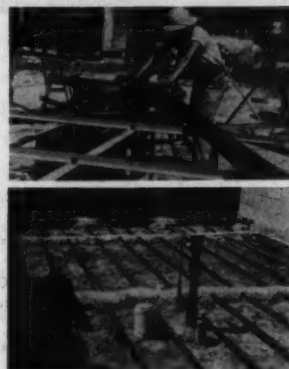
AT ROUNDUP

(Continued from page 175)

RADIANT HEATING SYSTEMS Are Installed in Three Georgia Schools

A radiant heating system has been installed in three new school buildings in Miller County, Ga., at a cost low enough to be important in an area where initial heating system outlay costs have been extremely high in proportion to the amount of heat produced and the number of hours used.

Field prefabrication and standardization of pipe were major factors in saving both time and labor on the project. Bends in all Jol-Duct coils and mains were made on an electric Tal Bender, as shown in the first photo below, and then the bent pipes were shoved directly onto pattern tables for immediate welding connections. Sizes of coils were restricted to those easily handled by two men for faster stacking in stockpiles and to expedite movement to permanent positions when ready.



After the grading was completed in each wing or section of the buildings, mains and coils were laid dead level on grout concrete chair supports, as shown in photo 2 above. Supply and return mains were laid nearest outside walls and in all hallways and corridors. The tops of the coils in their permanent locations were positioned 2 in. under the top of the concrete floor, thus limiting the possibility of leaks and guaranteeing the highest amount of heat transfer from hot water to panel. Several types of floor coverings were laid over the system. Perimeter insulation was installed around the entire outside wall, using insulating blocks 1 in. thick and 1-ft wide. The heating is controlled by an automatic thermostat system.

Albany Architects and Engineers, Albany, Ga., were architects for the schools. Contractors and Equipment Co., Colquitt, Ga., were the heating subcontractors.

(Continued on page 193)



Chosen for its excellent light reflectance properties, Gold Seal Rubber Tile adds comfort, quiet and color to the Research Classroom at the University of Michigan.

specify **GOLD SEAL® RUBBER TILE**

for a prestige floor with clearer, smarter colors!

Resilient! Gold Seal Rubber Tile is luxuriously quiet and comfortable under foot . . . cuts fatigue problems in schools, hospitals, homes . . . does a better job of resisting indentation from heavy office furniture.

Clearer Colors! It's a designer's delight. Truer, fresher colors give a luxury-look . . . stimulate impressive design combinations. Fine marbleization hides dirt and scuff marks.

Durable! Won't crack, chip or shatter. Does not require excessive maintenance—cuts upkeep and replacement costs.

Guaranteed! You and your clients are assured of finest quality by the Gold Seal guarantee—"satisfaction or your money back."

Specifications: Standard Gauge (.080")

Use: residential and light-traffic commercial and institutional areas. Sizes and patterns: 6" x 6" and 9" x 9" tiles. 10 marbled patterns.

Specifications: Heavy Gauge (.125")

Use: heavy-traffic commercial and institutional areas. Sizes and patterns: 6" x 6" and 9" x 9" tiles. 21 marbled patterns.

Installations: Suspended wood and concrete. On-grade concrete. Flexible, easy to handle and cut for minimum installation costs. For more information write: Architects' Service Dept.



**For home or business...
you get the finest choice of all in...**

INLAID LINOLEUM • RANCHTILE® LINOLEUM • VINYLFLOR • VINYLTOP • LINOLEUM,
VINYL, VINYLBEST, CORK, RUBBER AND ASPHALT TILES • CONGOWALL® ENAMEL
SURFACE WALL COVERING



GOLD SEAL

FLOORS AND WALLS

CONGOLEUM-NAIRN INC. KEARNY, N. J.

The Design of Manufacturers

Trust Company's Fifth Avenue office is ultra-modern. The motif is satin chrome.

So it was natural that the ultra-modern Madison design of the Sargent Integralock...in beautiful satin chrome finish...should be used all through the building.

In the photo at right, notice how wonderfully this Integralock blends with the black textured door, the gray stainless steel and the marble.

This lock also harmonizes with the wood-paneled doors of other offices.



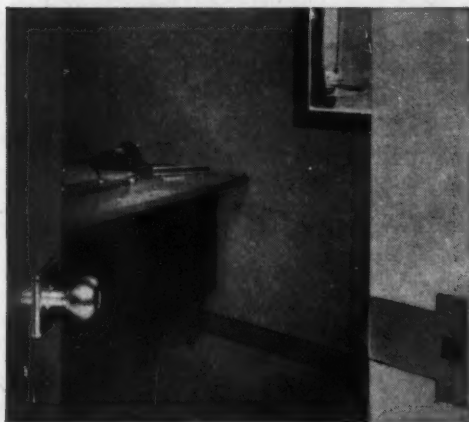
← **The New Fifth Avenue Home** of Manufacturers Trust Company in New York City...an entirely new kind of bank building...with an exterior of plate glass and polished aluminum.

Architects: Skidmore, Owings & Merrill

Builders: George A. Fuller Company

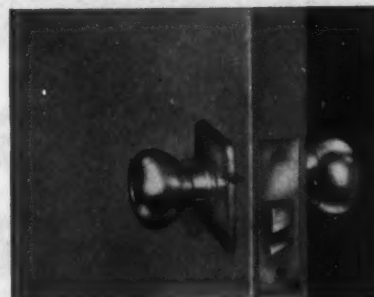
All hardware supplied by Sargent & Company

The last word...in Banks and Locks



→ **This Sargent Cylinder Dead Lock** guards the main banking room. Specify Sargent Locks, Door Closers and Exit Bolts with complete confidence for *your* new buildings. For full information, write us Dept. 7A, or see your supplier.

← **A Typical Office.** The handsome Sargent Integralock gives easy operation, sturdy performance, sure protection of the *Sentry Bolt*. Stop buttons automatically dead lock the outside knob.



↑ **Sargent Integralock** in a corridor of Manufacturers Trust Company. Integralocks meet every design, style, protection and convenience requirement. Available in all functions...5 different designs...a wide selection of knobs and escutcheons...any required keying...handsome brass, bronze, aluminum and chromium finishes.

SARGENT & COMPANY
New York • NEW HAVEN, CONN. • Chicago
Hardware of Character





Photo by Ullrich Meisel

aluminum **WINDOWS** and **SPANDRELS** *by* **GENERAL BRONZE**

M. D. ANDERSON HOSPITAL,
Houston, Texas

Architects: MacKie & Kamrath
Contractors: Farnsworth & Chambers

● Everywhere you look, whether it be in the north, south, east or west, you'll find outstanding buildings of all types—hospitals, schools, commercial and monumental buildings—with windows and curtain wall systems by General Bronze.

As the pioneer in aluminum curtain wall construction techniques and the foremost fabricator of fine aluminum windows, General Bronze has a world of practical experience in designing, engineering, fabricating and erection to offer architects and contractors.

As you plan new buildings, why not call in the General Bronze representative for consultation. He can be of real assistance to you in many ways in helping to solve your problems as they pertain to windows, spandrels, curtain walls and architectural metal work. Our catalogs are filed in Sweet's.



GENERAL BRONZE CORPORATION • GARDEN CITY, N. Y.

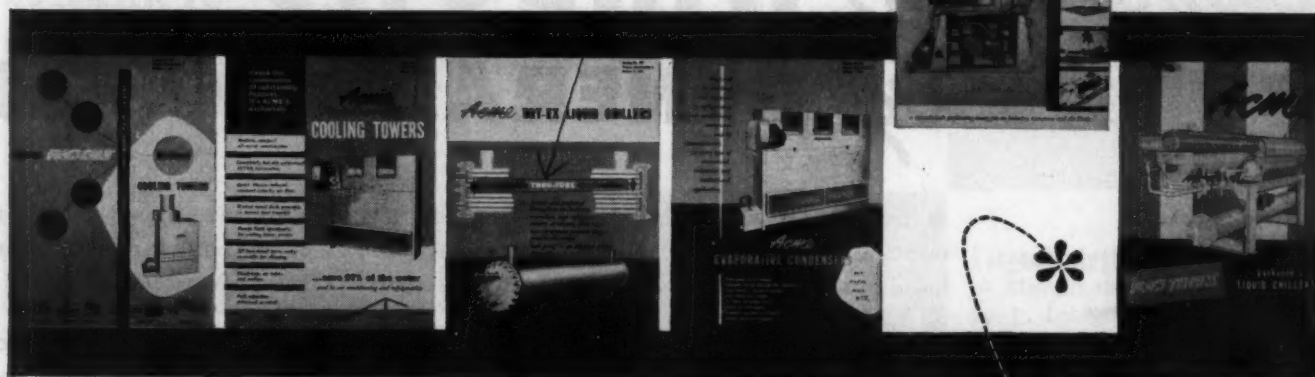
PERMATITE DIVISION—Custom-built Windows, Architectural Metal Work and Revolving Doors. ALWINTITE DIVISION—Stock-size Aluminum Windows.
BRACH MFG. CO. DIVISION—Multel, T. V., Radio and Electronic Equipment. STEEL WELDMENTS, INC. DIVISION—Custom fabrication in steel and iron.

the **WHY** of *Acme* **LEADERSHIP** in air conditioning and refrigeration engineering

Acme Industries, Inc., of Jackson, Michigan has been serving the Air Conditioning and Refrigeration industries since 1919. During that long span of years, Acme engineers have built a fount of knowledge and technical experience that enables them to design, build, and select products to fit any temperature control problem. Leading architects, engineers, refrigeration contractors, and manufacturers have come to depend upon and insist upon Acme products in their installations. Long lists of satisfied Acme users line the ranks of American business and industry. You can look to Acme for superior performance in all phases of air conditioning and refrigeration.

the *Acme* air conditioning and refrigeration library

To assist architects, consulting engineers and contractors in the selection of proper component parts for air conditioning and refrigeration installations, Acme has developed a complete new series of catalogs. Complete specifications and honest selection procedures make possible easy selection of units that will deliver full rated capacity for years of efficient, low-cost operation. Add the Acme library of essential information to your files.



ACME INDUSTRIES, INC.
JACKSON, MICHIGAN

Manufacturers of Quality Air Conditioning and Refrigeration Equipment since 1919

Evaporative Condensers	Shell-and-Tube, Shell-and-Coil Condensers	Heat Exchangers
Cooling Towers — 2 to 70 tons	Flow-Cold packaged Liquid Chillers to 15 tons	Liquid Receivers
Flow-Cold Unit Coolers	Flow-Therm packaged Liquid Chillers to 220 tons	Flow-Temp Heat Pumps
Dry-Ex (direct expansion) Liquid Chillers		Remote Room Conditioners
		Oil Separators

- ☐ Acme Flow-Cold Cooling Towers, 2 to 15 tons
- ☐ Acme Cooling Towers, 15 to 70 tons
- ☐ Acme Dry-Ex (Direct Expansion) Liquid Chillers
- ☐ Acme Evaporative Condensers
- ☐ Acme Flow-Cold Packaged Liquid Chillers, 2 to 15 tons
- ☐ Acme Flow-Therm Packaged Liquid Chillers to 220 tons

Name.....
Address.....
City..... Zone.....
State.....

for help on your
air conditioning or
refrigeration problems
phone your
Acme engineer



ALABAMA, Birmingham	Robert Sansing, Cecil Buck, 54-8534
ARIZONA, Phoenix	A. C. Baedlin, WH-5-6351
CALIFORNIA, North Hollywood	Dave Nurse, Erv Robart, Stanley 7-7131
CALIFORNIA, San Francisco	R. B. Holland.....Sutter 1-6062
FLORIDA, Hollywood	Allen Dean.....2-4919
FLORIDA, St. Petersburg	C. W. McIntyre, 7-5778
GEORGIA, Atlanta	Walter Garrard, Leo Sudderth....Exchange 8664
ILLINOIS, Chicago	Acme Industries, Inc.....MOhaw 4-6124
INDIANA, Indianapolis	Charles Lugar.....Broadway 9323
IOWA, Des Moines	Anderson Bros. Engr. Co.....Des Moines 5-5661
LOUISIANA, New Orleans	H. N. Stall, L. A. Flick.....Canal 9991
MARYLAND, Washington 7, D. C.	Stuart Mitchell.....National 8-4854
MASSACHUSETTS, Cambridge	Fred W. Smith.....Tro 6-0080
MICHIGAN, Detroit	C. K. Carter, R. A. Day.....Trinity 1-5848
MICHIGAN, Leslie	W. N. Hart.....404-2346
MINNESOTA, Minneapolis	R. H. McGinty.....Atlantic 6878
MISSOURI, Kansas City	T. J. Manning.....Baltimore 4077
MISSOURI, St. Louis	Palmer Still.....Wydown 1-2077
NEBRASKA, Omaha	Roger Anderson.....AT 3639
NEW YORK, Buffalo	J. Bert Slater.....Cleveland 6477
NEW YORK, New York	Acme Industries, Inc.....Murray Hill 2-3423
NEW YORK, Syracuse	J. W. Stevens.....72-1071
NORTH CAROLINA, Charlotte	Robert E. Mason.....2-1903
NORTH DAKOTA, Fargo	John Holm.....2-2365
OHIO, Cincinnati	J. W. Snyder, George Bull.....Elmhurst 2505
OHIO, Cleveland	Wm. G. Musson, John Ford.....Utah 1-5244
OHIO, Columbus	Richard Farr.....Kingswood 8757
OHIO, Toledo	J. F. Guest.....Adams 9516
OKLAHOMA, Tulsa	H. W. Weinholz.....2-6976
OREGON, Portland	Wm. Woolley.....BRoadway 3082
PENNSYLVANIA, Philadelphia	Harold Margolis, Marc Sheffer..Evergreen 2-4500
PENNSYLVANIA, Pittsburgh	E. J. Busch.....Museum 3-2500
TENNESSEE, Memphis	T. J. O'Brien.....8-0339
TEXAS, Dallas	Leo J. Freitas.....Dixon 9748
TEXAS, Corpus Christi	T. N. Inglis
TEXAS, Houston	Acme Industries, Inc.....Keystone 1418
TEXAS, San Antonio	L. S. Pawkett, Louis Hornor.....Fannin 1291
UTAH, Salt Lake City	Ted Brown.....9-8677
VIRGINIA, Richmond	E. Glenn Breeden, Jr.....88-1660
WASHINGTON, Seattle	Frank Ozanne.....SEneca 2377
WASHINGTON, Spokane	Hobart Tenaff.....MAdison 9052
WASHINGTON, Tacoma	H. F. Warren.....MArket 4281
WISCONSIN, MilwaukeeBRoadway 1-1414
or Contact the Chicago Regional Office	
CANADA, Montreal	Blair Livingston.....BEloir 6102
CANADA, Toronto	Bernard Kaufman.....Murray 78185

AIR ROUNDUP

(Continued from page 188)

NEW DEVELOPMENTS | Portable Air Meter and Bonding Material

Heating and air conditioning loads in buildings can now be determined more precisely than before by means of a portable air infiltration meter designed by C. W. Coblenz of the National Bureau of Standards. The new instrument, much less cumbersome than the equipment which has been restricted to laboratory installations in the past, will provide an improved means for determining the rate of air infiltration between different rooms of a building and the outside.

A new material consisting of a combination of metals and inorganic substances for bonding fiberglass is in the development stage by the U. S. Navy Bureau of Ordnance. The as yet unnamed material will produce laminates and tubular products of high strength, resistance to usual corrosive agents, and will be more suitable to higher temperatures than presently available fiberglass structural materials. John S. Nachtmann, inventor of the material and Supervisor of Materials at BuOrd, indicated that it could be used in roofing, flooring, panels, beams and molding.

SANITARY PLUMBING | Standards

New rigid standards for quality, dimensions and dimensional tolerances for sanitary plumbing have been adopted recently by the Cast Iron Soil Pipe Institute. Member companies of the Institute, representing over 80 per cent of the industry, will be issued a seal for products that conform to the specifications for weights, dimensions and patterns of soil pipe and fittings. The seal will not only eliminate sub-standard pipe and fittings but will also promote interchangeability of cast iron soil pipe and fittings made by different member manufacturers, thus lowering the ultimate cost to builders and homeowners.

BUILDING RESEARCH | CIB Bulletin

The C. I. B. — International Council for Building Research, Studies and Documentation — is now circulating a bi-monthly bulletin as a means of achieving its aim: "to encourage, facilitate and develop international cooperation in building research, studies and applied research and documentation covering not only the technical but also the economic and social aspects of building."

(Continued on page 196)

when there's more
than one floor
.... think of
Sedgwick

IN COMMERCIAL AND INDUSTRIAL BUILDINGS

CORRESPONDENCE LIFTS
AND DOORS



to move loads from floor to floor
and to make better use of space

SIDEWALK
ELEVATORS



FREIGHT-
WAITERS



DUMB WAITERS
AND DOORS



IN RESIDENCES

RESIDENCE
ELEVATORS



STAIR-
TRAVELORS



to add one-floor convenience

Sedgwick furnishes safe, modern vertical transportation equipment to fit in with your plans. Quality performance is assured by 60 years of constant improvements and engineering advances. Specified by three generations of architects. For free specification service and engineering recommendations, write:

Sedgwick

MACHINE WORKS

142 W. 15th St., NEW YORK 11, N. Y.

Specialists
in Vertical Transportation Since 1893

When it comes to **efficient
kitchens** ... nothing



Gas has speed, economy and flexibility—all the advantages that make it an extremely efficient fuel. Now you can get it — now you can offer it to your prospects — in the kind of appliances that spell immediate and recognizable efficiency to the housewife. The new Gas ranges light, time and cook automatically. The new Gas refrigerators have automatic ice-makers. Most important of all, you now have an excellent choice of automatic **Gas separate range units.**

Survey after survey proves women love these units. They love the no-bend, no-stoop of the oven. They love the usable under-the-counter space the range top gives them. They love the way the units become a built-in part of the kitchen. More and more builders are using such units to sell their medium-priced homes. Put *your* best foot forward by building New Freedom Gas Kitchens* with your choice of popular, automatic **Gas separate range units.**

*Reg. U. S. Pat. & Tm. Off.

makes as much sense as Gas

This New Freedom Gas Kitchen was especially designed for efficiency. Separate range units are made to "CP" standards by the **Caloric Stove Corp.** The noiseless **Servel** Gas refrigerator (with a 10-year warranty and no moving parts to wear) has the now famous automatic ice-maker. The **Republic Steel** cabinets house pots, pans and utensils in small, separate "work centers."

Don't miss the New Freedom Gas Kitchens in the Normandie Lounge and the lower exhibit level of the Conrad Hilton and the mezzanine of the Sherman at the NAHB Convention, Chicago, Jan. 16-20.

Rheem Coppermatic
automatic Gas water-heater.



Hamilton automatic Gas
clothes dryer with
matching automatic washer.

A fast-recovery water-heater is vital for today's homes . . . thanks to larger families, more bathrooms, automatic dishwashers and automatic clothes washers. (The latter uses 20 gal. of hot water for each washing cycle.) Gas water-heaters are 3 times faster than any other kind run by an all-automatic fuel. Another appliance that is getting more and more vital is the clothes dryer. Many women even rate it ahead of the washer because it saves the hardest part of wash-day—the hauling and hanging. A number of manufacturers offer dryers in a choice of 2 fuels. However, professional laundrettes prefer Gas for its speed and economy 30-to-1. If you can't supply dryers, rough in the outlet and the vent and include feed lines so the customer can choose Gas. She'll thank you for it.

AMERICAN GAS ASSOCIATION

Your local Gas company will be happy to work with you on any problem.

Only Gas



does so much—costs so little

GAS—THE MODERN FUEL FOR AUTOMATIC COOKING...REFRIGERATION...WATER-HEATING
... HOUSE-HEATING ... AIR-CONDITIONING ... CLOTHES-DRYING ... INCINERATION.



Designed for heavy traffic

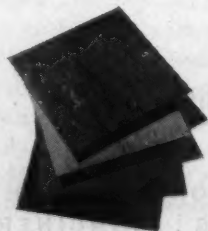
In public places, under the daily pounding and traffic of thousands of feet, Wright Rubber Tile stands up like no other resilient flooring. It thrives on punishment—literally bounces back for more.

Wright resists indentation, cigarette burns and penetration by dirt. The proof lies in the many Wright floors installed over 30 years ago, which remain beautiful and serviceable today.

A complete description of all Wright products, together with color charts and specifications, is available in our new 8-page folder. A copy is yours for the asking.

WRIGHT MANUFACTURING CO., 5205 Post Oak Road, Houston, Texas

WRIGHTEX
WRIGHTFLOR
VINYL TILE
ECONOTILE



WRIGHT RUBBER TILE

The 100-Year Floor!

A-E ROUNDUP

(Continued from page 192)

HANDBOOKS | And a Research Paper

IES Lighting Handbook, 2nd ed. Illuminating Engineering Society (1860 Broadway, New York, N. Y.) 1954. 1000 pp, illus. \$8.

This second edition is a 75 per cent revision and updating of the previous edition and represents two years' work by some 500 members and 37 IES technical committees. IES calls it a fulfillment of "the need for complete information on all aspects of the art and science of illumination."

Plastics Engineering Handbook, compiled by The Society of the Plastics Industry. Reinhold Publishing Corp. (430 Park Ave., New York 22, N. Y.) 2nd ed. 1954. \$15.00.

With contributions from over 200 engineers, technicians and other authorities in the plastics industry, this handbook is divided into five main sections covering materials and processes, design, finishing and assembly, testing, and SPI standards. Commercial standards are included for testing, rating, certification and labeling of plastics products.

Residential Wiring Handbook, compiled by the Residential Committee on Industrial Wiring Design (Room 2650, 420 Lexington Ave., New York 17, N. Y.) Revised edition, 1954. 32 pp, illus. 25¢.

This revised handbook offers the latest authoritative data on wiring for air conditioning and individual circuits for laundry and kitchen appliances. It foretells the probability of continued rapid increase of demand on home electrical systems and raises the standard for wiring adequacy to a minimum of 100 amp for service entrance capacity in compliance with the recommendation of the National Association of Home Builders.

The handbook is applicable to one-story open floor-plan houses as well as two-story and multi-family dwellings and covers the rewiring of older homes.

Fastening of Gypsum Wallboard with Threaded Nails, by E. George Stern, Research Professor of Wood Construction, Virginia Polytechnic Institute, Blacksburg, Va.

Threaded nails offer more holding power for fastening gypsum wallboard than do plain-shank nails, according to results of tests conducted by Prof. Stern and sponsored by the Independent Nail & Packing Co. of Bridgewater, Mass.



FACTORY WAREHOUSES



Ualco
aluminum
WINDOWS

Look to Ualco!

Ualco manufactures the most *complete* line of aluminum windows in the field, the *only* complete line.

NOW—Ualco announces another great service to the building industry: direct factory

warehouses . . . strategically located . . . with full stocks . . . to give you fast, money-saving service on any style windows, in any quantities!

For windows as you want them—when you want them—look to Ualco, world's largest manufacturer!

THE COMPLETE LINE

SEE OUR CATALOG IN SWEET'S ARCHITECTURAL FILE 16A OR WRITE US FOR COMPLETE INFORMATION
UN

SOUTHERN SASH SALES & SUPPLY CO. — SHEFFIELD, ALABAMA

WAREHOUSES AND SALES OFFICES: Canton, Ohio; Elizabeth, N.J.; Hialeah, Florida; Florence, Alabama; Montgomery, Alabama; Van Nuys, California; Greensboro, N. C.; Aurora, Illinois; Ruston, La.; Kansas City, Missouri.

ASK ABOUT OUR ENGINEERING PLANNING SERVICE to assist architects, engineers and contractors in making "take-offs" and solving window problems.

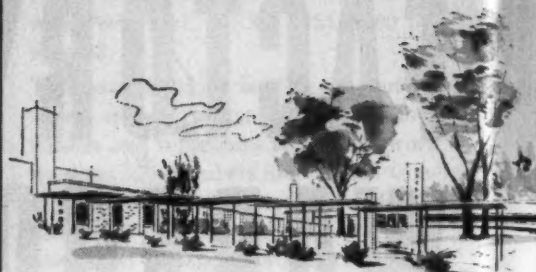
UALCO WINDOWS ARE UNCONDITIONALLY GUARANTEED AGAINST DEFECTIVE MATERIALS AND WORKMANSHIP

UALCO—WORLD'S LARGEST MANUFACTURER OF ALUMINUM WINDOWS





Echoes are absorbed by the Armstrong Travertone ceiling in this beautifully designed, two-story lobby. Travertone's attractive white fissured finish blends ideally with the handsome combination of buff colored brick walls and beige terrazzo floor.



**BELLARMINE COLLEGE,
Louisville, Kentucky**

Architect:

Thomas J. Nolan & Sons

General Contractor:

Al J. Schneider Company

Acoustical Contractor:

The Carrell-Rogers Co., Inc.



Discussions are free from distracting noise in this tastefully designed seminar room. The quiet, handsome Travertone ceiling muffles the sound of foot-falls, scraping chairs, and cuts down voice echo.



Quick, easy maintenance helps keep this cafeteria ceiling of Armstrong Travertone within the school's rigid standards of sanitation. Armstrong Travertone can be cleaned by vacuuming or washing with mild soap and water.

High light reflection from the acoustical ceiling in this classroom is due to Cushiontone's factory-painted white finish which reflects 79% of the light that strikes it. Cushiontone can be repainted without lowering its acoustical efficiency.



Sound conditioning helps college plan for future

Expansibility is a key design feature of the Administration-Library building at Bellarmine College. The new building's chapel-auditorium area can be converted to classrooms as soon as funds permit a separate chapel at the growing four-year-old school. The change will be simple because the architect provided all areas of this well-planned structure with forward-looking installations of the basic elements—including highly important sound conditioning.

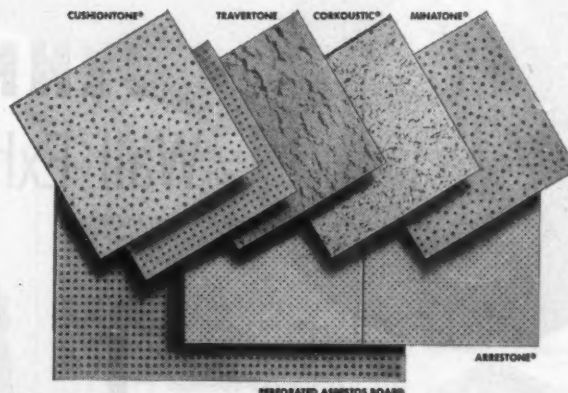
Noise-absorbing ceilings of Armstrong acoustical materials were used throughout the building. For the artistically modern two-story lobby, as well as the library, student theater, business offices, corridors and cafeteria, the architect chose ceilings of Armstrong Travertone*. In addition to high noise absorption, Travertone gives a distinctive appearance which blends well with the exposed brick walls and terrazzo floor of the lobby. Travertone's mineral wool composition is incombustible, meeting all fire-safety regulations.

In the classrooms, ceilings of Armstrong Cushiontone prevent sound from reaching a disturbing level. Cushiontone, a wood fiber material, offers high sound-absorption efficiency. It absorbs up to 75% of the noise that strikes its surface. Low in

* Trade-Mark

both material and installation cost, Cushiontone ceilings permitted the architect to cover large areas economically. Ease of maintenance, repaintability, and high light reflectivity are other important Cushiontone features.

Travertone and Cushiontone are only two of six Armstrong acoustical products. Get full details on Armstrong's entire line of sound-conditioning materials from your Armstrong acoustical contractor. He'll be glad to give you more detailed product information and a free estimate, without obligation. For the free booklet, "How to Select an Acoustical Material," write Armstrong Cork Company, 4201 Rock Street, Lancaster, Pennsylvania.

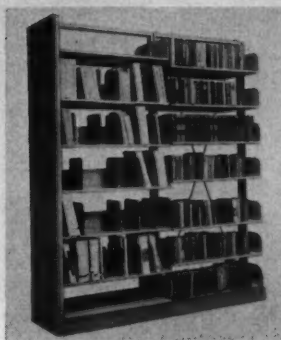


Armstrong ACOUSTICAL MATERIALS

(Continued from page 177)

MORE LIBRARY EQUIPMENT

BOOKSTACKS, one of the most important elements in a library, can fit into any type of library scheme. They can be multi-tier stacks, with shelf supports rising through two or more floors, or single-tier. Adjustable shelving is practical, and a variety of special shelf units are available. Flexibility is evident, so that libraries can be expanded when necessary.



Divided shelves, interchangeable with standard bracket-type shelves to the right, have adjustable dividers which permit magazines and pamphlets to stand by themselves. *W. R. Ames Co., 150 Hooper St., San Francisco 7, Calif.*



Free-standing bookstacks with double backs and adjustable shelves are manufactured by *The General Fireproofing Co., Youngstown 1, Ohio.*



Standard single-tier bookstacks with adjustable shelves are part of the line of *Art Metal Construction Co., Jamestown, N. Y.*



Strong shelving for basement or back-room storage can be erected with single rows or double rows (by placing single rows back to back). Rows of any desired length can be built. *Edward Hines Lumber Co., 2431 So. Wolcott Ave., Chicago 8, Ill.*

(Library Equipment continued on page 204)

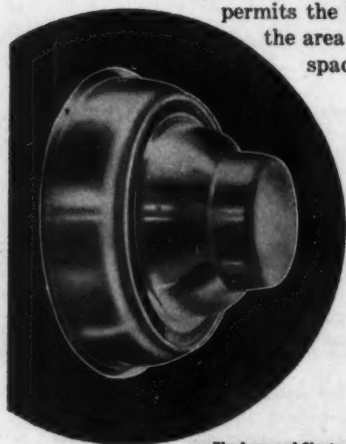


... HOW TO CUT DUCT COSTS

This is the story of how to save money on ventilating—the story of long duct runs vs. short ducts.

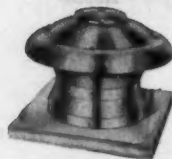
PROBLEM: To reduce long and elaborate duct runs connected to power exhausters—runs that often cost more than the heart of the system, the fan, itself. This problem is more acute in multi-story construction or existing structures where ducts are brought through upper floors to the roof.

SOLUTION: Use Jenn-Air Wall Exhausters ... thus eliminating most duct work. One simple opening through the outer wall permits the Wall Exhauster to be connected directly to the area of ventilation. In this way valuable interior space is saved and installation costs are reduced.



JENN-AIR Wall Exhausters

Visit us in Booth 27 at the ASH & VE Show.



The Long and Short of it on the Roof

Jenn-Air Low-Contour Roof Exhausters

Design blends with today's buildings. Gone are unsightly penthouses, and gravity stacks. First with spun aluminum construction, Jenn-Air Exhausters are setting the trend in the field.

JENN-AIR PRODUCTS COMPANY, INC.

Architects & Builders Building Indianapolis 4, Indiana





**SEE RUST-OLEUM APPLIED DIRECTLY OVER
SOUND RUSTED SURFACES! MAKE THIS
TEST UNDER YOUR OWN CONDITIONS AND
SEE PROOF OF PERFORMANCE!**

See Rust-Oleum 769 Damp-Proof Red Primer actually applied over a badly rusted surface after simple scraping and wire-brushing to remove rust scale and loose rust in the Rust-Oleum "*rusted panel demonstration.*" Rust-Oleum's specially-processed fish oil vehicle *penetrates* rust to bare metal usually eliminating sandblasting and other costly surface preparations.

Rust-Oleum finish coatings in Aluminum, Green, White, Gray, Yellow, Black, Orange, Blue and others provide both *Rust Prevention and Decorative Beauty!* Specify Rust-Oleum for new construction, maintenance, and re-modeling. See Sweets for complete catalog and nearest Rust-Oleum Industrial Distributor, or attach coupon to your business letterhead.

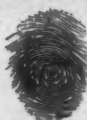


See local classified telephone directory under Rust Preventives or Paints for nearest Rust-Oleum Industrial Distributor.



RUST-OLEUM®

STOPS RUST!



There Is Only One Rust-Oleum. It Is Distinctive as Your Own Fingerprint. Resists Rain, Sun, Fumes, Snow, Heat, Salt Air, Salt Water, etc.



ATTACH TO YOUR LETTERHEAD — MAIL TO
THE RUST-OLEUM CORPORATION
2501 OAKTON ST., EVANSTON, ILLINOIS

I want to know more about RUST-OLEUM. Send me without obligation a FREE sample. I intend to test it ☐ indoors; ☐ outdoors; on ☐ wood; ☐ rusted metal; ☐ clean metal; ☐ brick; ☐ concrete; ☐ stucco;

(State on the above line object or structure such as tractor, tank, fence, metal sash, roof, floors, walls, etc.)

Subject to special conditions: ☐ weather; ☐ humidity; ☐ fumes; ☐ brine; ☐ dampness.

☐ I have a chain-link fence. Please send full information on RUST-OLEUM's new Roller Method that cuts re-coating costs.

☐ Send Complete Catalog with Color Guide

Please be sure to indicate Color Preference Here

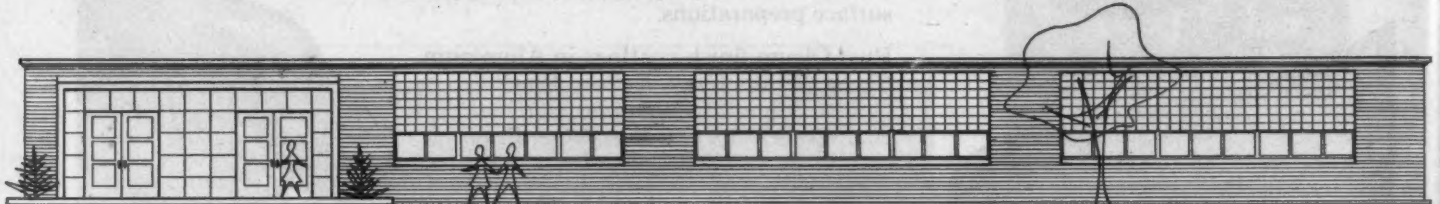
☐ Have Qualified Representative Call

NOTE: We want to supply you with the correct sample for your test. Please be sure to check off all appropriate information about your problem.

MARSHFIELD, WISCONSIN

The interesting results of Day-Brite lighting in a school addition

Firm believers in top quality equipment, Architects Taylor, Foster & Yasko specified Day-Brite for their Jefferson School project. But even they didn't expect the premium lighting results they got.



Two months after the Jefferson School addition was opened, Karel Yasko made a demonstration. Partly for the benefit of the School Board and the City Council. Partly to reassure himself.

With a freshly calibrated light meter, Mr. Yasko measured the performance of the Day-Brite LUVEX* installation his firm had specified. He reported his findings and enthusiasm to us in a letter we treasure very much.

In part, the letter states: "The LUVEX fixtures are spaced 8'0" on centers, 8" hanger suspension from a 10'0" high acoustical tile ceiling. We obtained readings at the desk tops of 80 footcandles at mid-spacing and 75-78 footcandles directly under the 2-lamp fixtures. Remarkable!"

And most important, these high levels combine with over-all LUVEX low-brightness to furnish a completely comfortable visual environment for young eyes.

* *

This particular case history of LUVEX premium performance is doubly significant because it solidified client satisfaction on a key problem every school architect faces.

School and local government people rightly expect good lighting. And because lighting results are so vulnerable to comparison, so easily measured, your lighting installation is often the first phase of your work called upon to prove itself.

Day-Brite's LUVEX consistently offers the most dependable answer to the school architect's lighting needs.

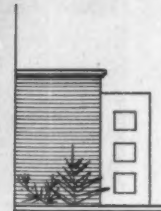
You may already be a LUVEX man. If you are, you *know* why more LUVEX fixtures are specified for school lighting than any other single make. If you haven't yet heard the full LUVEX story, call your Day-Brite representative. The information he can give you may well be the most valuable lighting news you've ever heard.

Day-Brite Lighting, Inc., 5465 Bulwer Ave., St. Louis 7, Missouri.
In Canada: Amalgamated Electric Corp., Ltd., Toronto 6, Ontario.

*Trade-Mark Registered.



CALL OR WRITE YOUR NEAREST DAY-BRITE REPRESENTATIVE



ABOVE: Clean, fresh design in classrooms is heightened by the high level of evenly distributed illumination from LUVEX fixtures. LUVEX is one of the very few fixtures with low enough cross-wise brightness to allow this type of "across-the-room" lighting layout.

LEFT: The kindergarten is cheerful and kind to young eyes. Good lighting, such as this LUVEX illumination, is important in helping children get their school life off on the right foot. Learning is a process 80% controlled by the eyes. Youngsters in this kindergarten won't be denied the opportunity to see properly, even those sitting in the back of the room.



5410



THE FIRM OF TAYLOR, FOSTER & YASKO of Stevens Point and Wausau, Wisconsin, designed the Jefferson School addition. At left is George Foster; center, Karel Yasko; right, Gage Taylor. Engineer was John K. Primm, P. E., Manitowac, Wisconsin. The Electrical Contractor was Merkle Electric, Marshfield, Wisconsin.

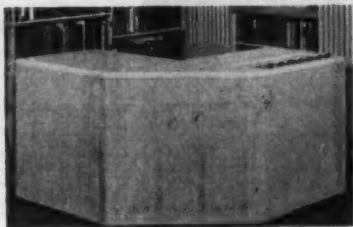
BELOW: This spacious area serves as a multi-purpose room. The exposed wood beams and steel roof deck form an interesting overhead pattern. Day-Brite incandescent lens boxes are mounted directly to the roof deck to furnish a novel and effective lighting layout. Recessed Duo-Frame lens boxes light the stage.



A.E. PRODUCTS

(Continued from page 200)

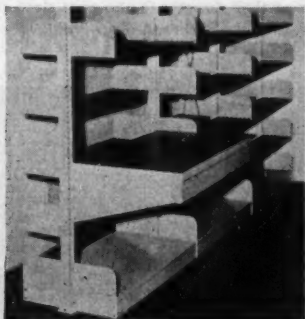
CHARGING DESKS are made in units by Remington-Rand, with corner units and straight units with drawers, shelves or card files, for combining into the type of desk desired. *Remington-Rand, Inc., 315 Fourth Ave., New York 10, N. Y.*



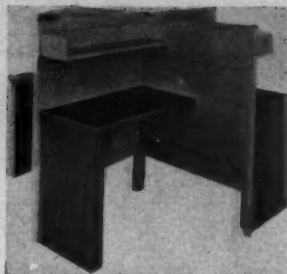
GLOBES are often considered essential in a library. The 25-in. globe pictured below, *The Aristocrat*, is produced by *J. L. Hammell Co., Kendall Square, Cambridge 42, Mass.*



CARRELLS for readers and researchers are becoming more and more integrated with other equipment in the library.



This work desk can be attached to any standard bracket column; can be removed to any part of the stack area. *Virginia Metal Products, Inc., Orange, Va.*

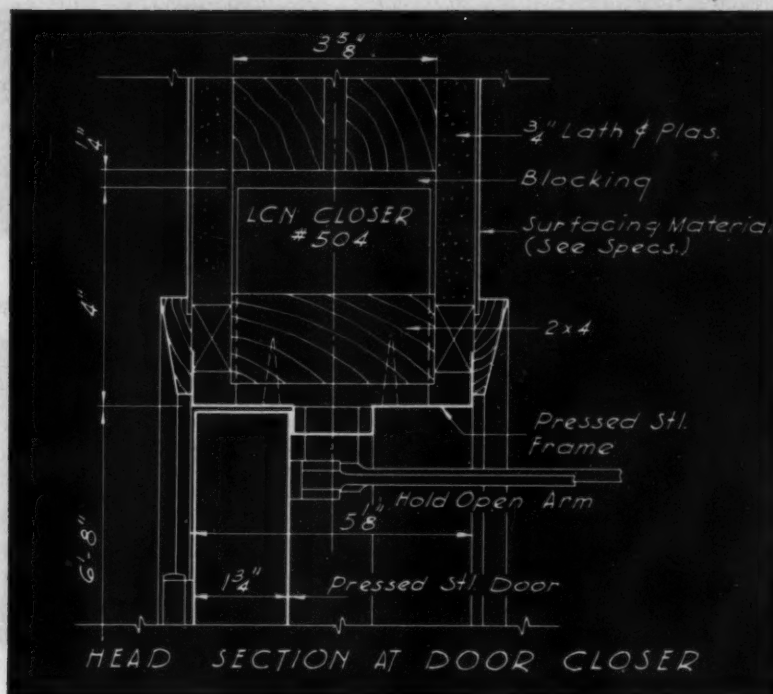


These study carrels, designed for maximum space utilization, are wired for lights. Other combinations are possible. *Globe-Wernicke Co., Cincinnati 12, Ohio.*



FURNITURE. Tables and chairs for school libraries are made by the *American Seating Co., Ninth and Broadway, Grand Rapids 2, Mich.*

(Library Equipment continued on page 206)



CONSTRUCTION DETAILS


for LCN Overhead Concealed Door Closer Installation
Shown on Opposite Page

The LCN Series 500 Closer's Main Points:

1. Efficient, full rack-and-pinion, two-speed control of the door
2. Mechanism entirely concealed; arm visible on inside of an out-swinging door
3. Hydraulic back-check prevents door's being thrown open violently to damage door, walls, etc.
4. Double lever arm provides maximum power to overcome wind and drafts
5. Arm may be hold-open type, 90° to 140° or 140° to 180°

Complete Catalog on Request—No Obligation
or See Sweet's 1955, Sec. 17e/L

LCN CLOSERS, INC., PRINCETON, ILLINOIS



LECTURE ROOM

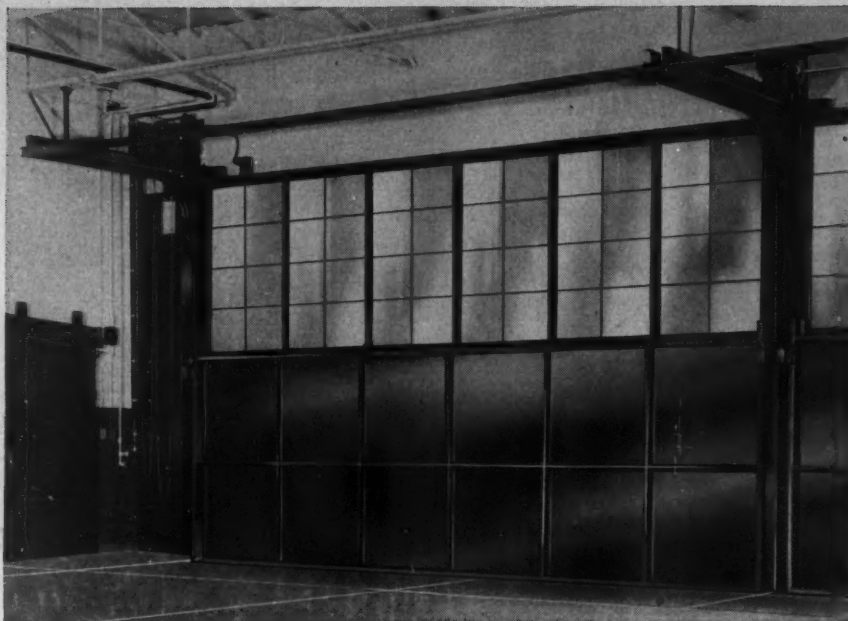
Pilafian and Montana, Architects

MODERN DOOR CONTROL BY *LCN* • CLOSERS CONCEALED IN HEAD FRAME

KRESGE SCIENCE LIBRARY, WAYNE UNIVERSITY, DETROIT, MICHIGAN

LCN CLOSERS, INC., PRINCETON, ILLINOIS

Construction Details on Opposite Page



In Industrial Doors . . . TURNOVER MEANS EFFICIENCY

The Byrne Custom Turnover Door provides an attractive weathertight closure for openings up to 25' wide by 25' high. It has many features that make it ideal where frequent and dependable service is required. Operation is smooth and rapid for efficient movement of vehicles and materials. When open, doors require minimum of space permitting maximum use of inside area. Low maintenance required because of all-steel construction and few working parts. All doors are counter-weighted with no springs to weaken, wear out or bind. Wedge-tight weathering keeps heat on the inside—weather on the outside. Turnover Doors are available in a wide latitude of architectural treatments.

Standard Turnover Doors incorporating all the custom features are available for openings up to 14' wide by 14' high.



Byrne Turnover Door partially open. Lower door leaf slides under upper half as two leaves move together to overhead position.



When fully open, door projects into building slightly more than half its full height.

Send For **FREE** Catalog

For full information on all Byrne Doors, write for a free copy of this new catalog—or look in Sweet's Catalog.



BYRNE doors, inc.

1603 E. 9 MILE ROAD, FERNDALE, DETROIT 20, MICH.

Dept. c-7 101 Park Ave., New York 17, N. Y. • Cafritz Bldg., Washington 6, D. C.

A-E PRODUCTS

(Continued from page 204)

LIGHTING in bookstacks must illuminate vertical and horizontal planes evenly, producing a high level of illumination along the sides of stacks and the floor.



Holophane No. 02076 lights these bookstacks from a ceiling height of 7 ft 3 in. Bookstacks are spaced 6 ft on centers. Aisle width is 3 ft. *Holophane Co., Inc., 342 Madison Ave., New York 17, N. Y.*



Detachable, semi-circular louvers on both sides of this fluorescent fixture direct light at books on both sides of aisle. *Fluorescent Fixtures of California, 3320 18th St., San Francisco 10, Calif.*

The Staklite fixture for incandescent lights, finished in white porcelain enamel, has V-shaped flanges to shield the light source from the line of vision and reflectors which direct light to the bookstacks. *Appleton Electric Co., 1701-59 Wellington Ave., Chicago 13, Ill.*

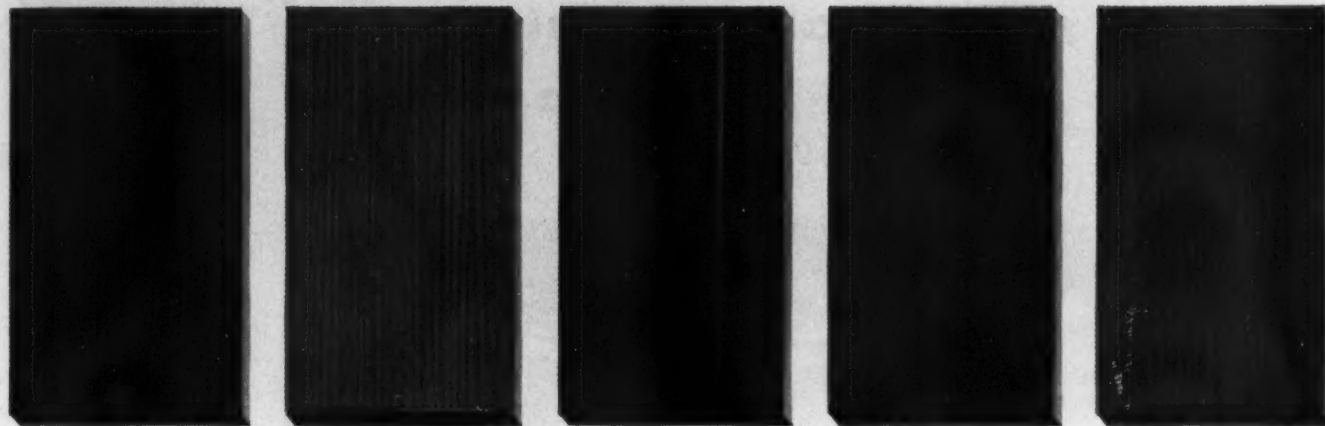


DISPLAY is possible on swinging panels as well as in cases. Wing-panel display shown above is by *Multiplex Display Fixture Co., 910-920 No. 10th St., St. Louis 1, Mo*

(Library Equipment continued on page 210)

Which is REDWOOD?

WOOD CHIP Set R-1:



REDWOOD Rez

SAGE Rez

MAHOGANY Rez

CEDAR Rez

DRIFTWOOD Rez

Each and every one is Redwood!

Redwood *with* Rez. That's the important difference! And we'll send you actual Redwood chips treated with Rez in all the above finishes to prove it's *not* done with "mirrors."

HAVE ACTUAL CHIPS AT YOUR DRAWING BOARD AS YOU WRITE SPECS

No need to rely on printed color cards or machine-coated chips. Fill in coupon for Rez Wood Chip Set R-1—actual Redwood chips, finished as shown above, to help you in the planning stage and to show clients on-the-job results.

NOW! USE REDWOOD FOR ITS STRENGTH, EASY WORKING QUALITIES . . . TRANSFORM IT WITH REZ

Redwood—or *any* wood—becomes a *new* material with Rez. For Rez is not a paint, not a varnish—Rez sinks *deep* into the pores of wood, *bonds* with it, equalizes grain porosity. You can use wood as never before—without fear of warping, swelling, cracking, discoloration, or climatic deterioration.

REZ . . . A FAMILY OF FINISHES

Rez is the name of a *family* of wood finishes that answer *all* your finishing needs—for both interior and exterior use. *Wherever* you plan to use wood, we suggest you look into the Rez finishing system. You'll find it offers unusual benefits.

INVESTIGATE THESE REZ PRODUCTS

Rez SEALER AND PRIMER (clear Rez)—a primer coat for both interior and exterior use. Prevents "grain raise," presents a uniformly smooth surface for fast and easy application of stain, paint, or enamel. Also makes an exceptionally good final interior finish.

Rez COLOR-TONES—for both interior and exterior use. Available in Redwood, Mahogany, Sage, Driftwood and Cedar—or custom intermixes to create your own tones.

WHITE Rez—blondes without chemical bleaching. An easy 2-step way to achieve the light surfaces favored today.

SATINWOOD Rez—finishes surfaces to a pleasing, satiny sheen formerly obtained only by hand rubbing.



LAUX[®]
Rez

becomes part
of the wood



Sales offices in Atlanta; Boston; Bryn Mawr, Pa.; Chicago; Los Angeles;
New York; Santa Clara; Seattle.

A wide variety of Rez finishes on other standard finishing woods is available on request. Or special woods and/or finishes will be promptly prepared to your specifications.

Write: Monsanto Chemical Company, Merchandising Division,
800 North 12th Street, St. Louis, Missouri.

Please check:

- ☐ Send Wood Chip Set R-1.
- ☐ Other data requested. Details attached.

Name and Title

Company

Street

City State

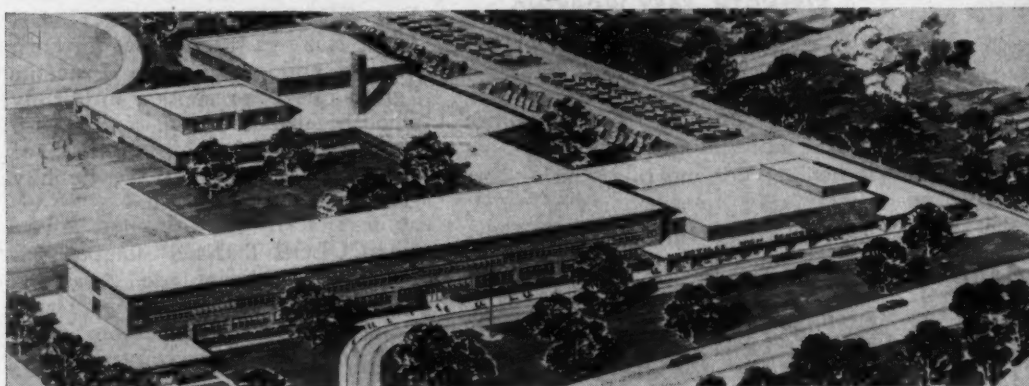
AETNA DOORS and FRAMES
are part of America's
great school building
program



GENERAL GEORGE W.
WINGATE HIGH SCHOOL,
Brooklyn, N. Y.

ARCHITECTS:
Kelly & Gruzen,
New York

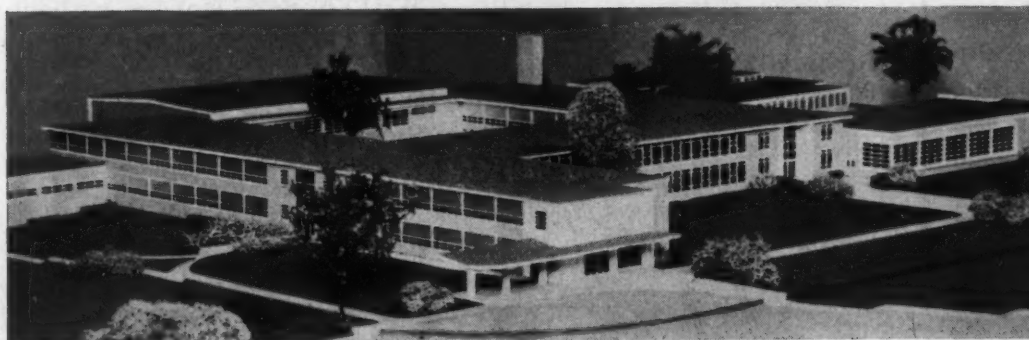
GENERAL CONTRACTOR:
Caristo Construction
Corporation
Brooklyn, N. Y.



HICKSVILLE HIGH SCHOOL

ARCHITECTS:
Knappe & Johnson,
New York

GENERAL CONTRACTOR:
Castagna & Son, Inc.,
Rockville Centre, N. Y.



**WHEATON JUNIOR-SENIOR
HIGH SCHOOL**, Wheaton,
Montgomery County,
Maryland

ARCHITECT:
Ronald S. Senseman,
Washington, D. C.

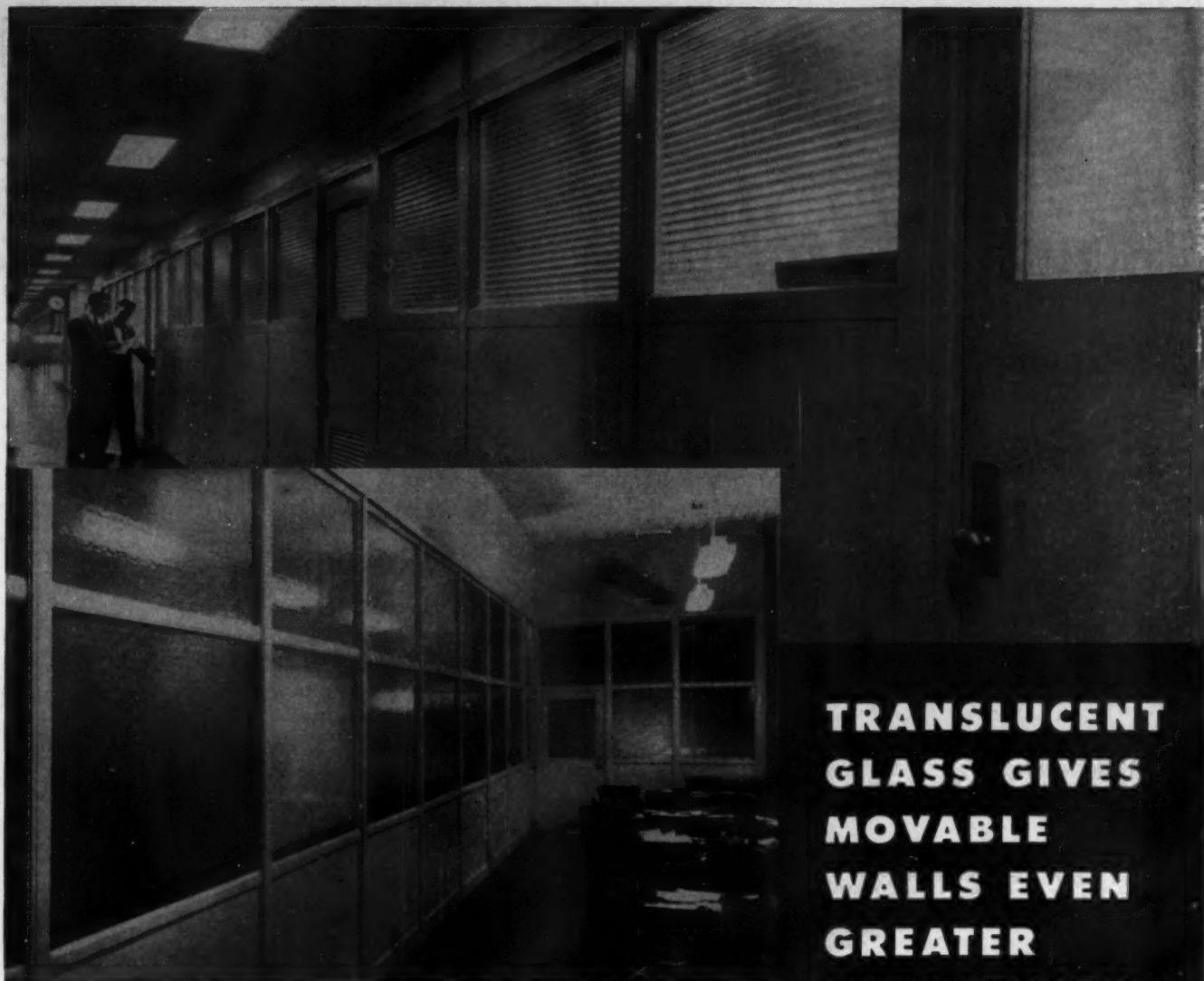
GENERAL CONTRACTOR:
F. H. Martell Co., Inc.,
Washington, D. C.

And remember, Aetna is the only specialized producer
of hollow metal with BONDERITE . . .
so be sure to specify AETNA and BONDERITE.

AETNA STEEL PRODUCTS CORPORATION

730 Fifth Avenue, New York 19, N. Y.





Top: VMP's Type "SP" Mobilwall glazed with Mississippi Broadlite Glass.
Bottom: VMP's Type "M" Mobilwall glazed with Mississippi Syenite in offices of Michigan Bell Telephone Co., Detroit, Michigan. Smith-Hinchman & Grylls, Architects.

TRANSLUCENT GLASS GIVES MOVABLE WALLS EVEN GREATER VERSATILITY

Office Layouts and Daylighting Made Easy with Movable Walls Glazed with Mississippi Glass

Efficiency is the word for the ease with which present and future office layouts can be made with famous VMP Mobilwalls that can be arranged to grow with need. Virginia Metal Products Company has designed its partitions for utmost efficiency in maintaining high lighting levels as well as meeting space requirements. Mobilwalls feature glazing with a variety of Mississippi Glass patterns. Adjacent areas are flooded with copious quantities of "borrowed light" which makes offices seem larger, friendlier. Seeing tasks are easier and the result is a modern, efficient work area combined with a pleasant atmosphere.

There is efficiency, too, in the glass, itself. For glass never wears out, never requires painting. It wipes shining clean with a damp cloth... always looks new.

Make your client's office tasks lighter. In your plans for office interiors, specify glass by Mississippi. Available in a wide variety of handsome patterns and surface finishes wherever quality glass is sold.



Write Dept. 7 today for free idea booklet. Samples on request.

MISSISSIPPI *Glass* **COMPANY**

88 ANGELICA ST. SAINT LOUIS 7, MO.
NEW YORK • CHICAGO • FULLERTON, CALIF.



WORLD'S LARGEST MANUFACTURER OF ROLLED, FIGURED AND WIRED GLASS

FOR LABORATORY PROJECTS

Maximum Flexibility

Anatomy laboratory
—St. Vincent's School
of Nursing, California
—another in the
outstanding list of
Hamilton-equipped
school laboratories.



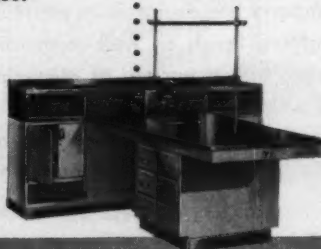
Best laid plans for school, hospital and college laboratories come off beautifully when you count Hamilton in from the start. There's a remarkable selection of Hamilton standard equipment and specialized units for every planning and installation problem. Give invaluable flexibility to your laboratory plans by contacting your Hamilton Field Engineer for free help—backed by work-gained experience.

Send in the coupon below for that know-how help from Hamilton! No obligation, of course.

Laboratory Equipment Division

Hamilton

MANUFACTURING COMPANY, TWO RIVERS, WISCONSIN



Hamilton Manufacturing Company, Two Rivers, Wisconsin

☐ Please send me literature describing Hamilton laboratory equipment. I am most interested in equipment for ☐ schools and colleges; ☐ hospitals; ☐ industrial laboratories. ☐ Please have your Field Engineer contact me.

NAME _____ POSITION _____

FIRM _____

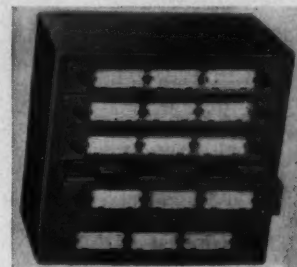
ADDRESS _____

CITY _____ STATE _____

AH PRODUCTS

(Continued from page 206)

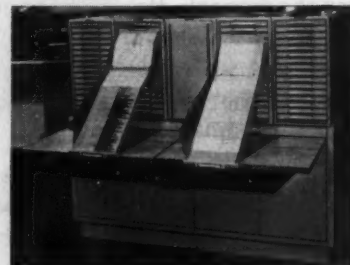
STORAGE FACILITIES must be compact in a library in order to provide space for the quantities of increasingly diversified sources of information. Modern libraries house not only books but also films, slides, tape recordings and phonograph records as well as the regular library files.



This six-drawer slide cabinet will hold approximately 1980 2- by 2-in. glass slides. *Brumberger Sales Corp., 34 34th St., Brooklyn 32, N. Y.*



This film storage cabinet will store 100 reels, with separate shelves for 400-, 600-, 800-, 1200- and 1600-ft reels. *Wallach & Associates, 1532 Hillcrest Rd., Cleveland 18, Ohio.*



This Visible Record cabinet files record cards from 5 x 3 to 11 x 8. Disappearing fire doors with lock are optional. Stand with storage shelves has sliding workshelf. *Acme Visible Records, Inc., Crozet, Va.*

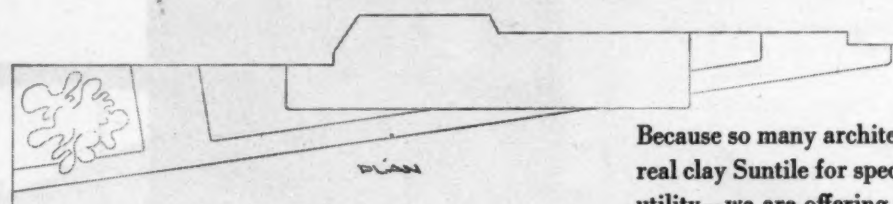
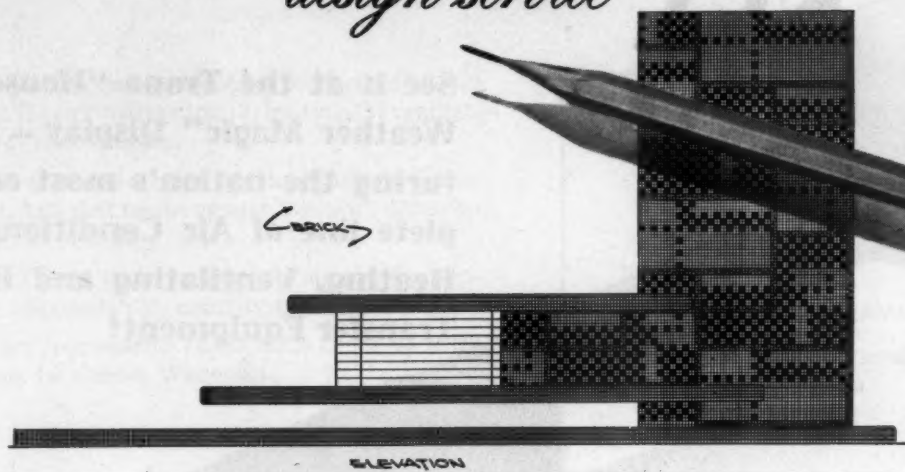
(Gymnasium Equipment on page 214)

announcing....

a new



design service



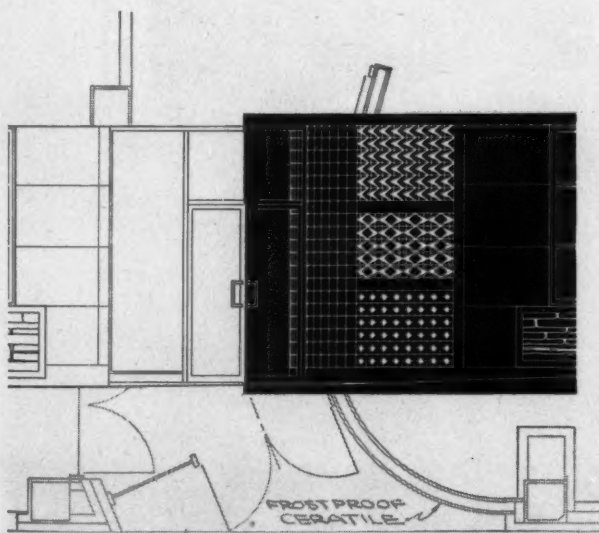
Because so many architects and designers are now using real clay Suntile for special decorative effects—as well as for utility—we are offering you the services of our staff of trained ceramic artists.

These specialists are prepared to execute your own designs faithfully, or to submit suggested treatment in tile to fit your general specifications. They will make careful layouts to help you visualize the completed job, permit accurate estimates, and guide the tile setter—at no obligation to you, of course.

With this service, you can be sure that the finished job will be as fine as the original concept. Your client gets top quality material and good design—plus an installation that is guaranteed by the Suntile dealer who performs the work.

Why not send us your preliminary ideas for new designs in Suntile—or write for more data on Suntile services?

Address: Dept. AR-15.

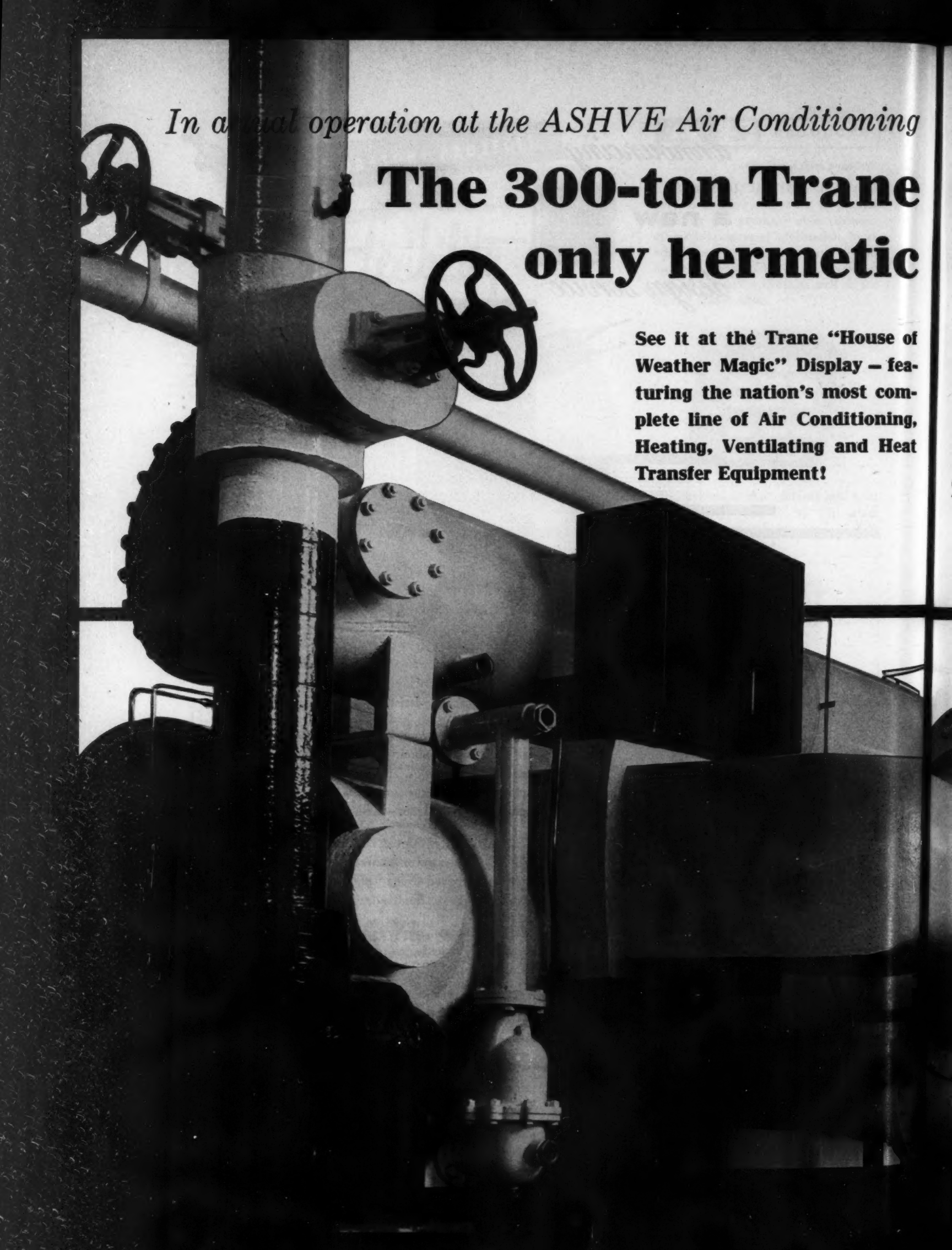


FLOOR PLAN
SCALE 1/4"=1'-0"

THE CAMBRIDGE TILE MFG. CO.

P. O. Box 71, Cincinnati 15, Ohio





In actual operation at the ASHVE Air Conditioning

The 300-ton Trane only hermetic

See it at the Trane "House of Weather Magic" Display — featuring the nation's most complete line of Air Conditioning, Heating, Ventilating and Heat Transfer Equipment!

Exposition! JANUARY 24-28, CONVENTION HALL, PHILADELPHIA.

CenTraVac®—the industry's centrifugal compressor!

Only TRANE offers you *matched* products in *all four* fields: (1) air conditioning, (2) heating, (3) ventilating, (4) heat transfer.

TRANE products are designed and built for use *together*. And that means greater "system" dependability . . . year after year.

Make TRANE your *one source* of supply. Concentrate responsibility—simplify procurement.

Contact your nearby TRANE Sales Office, or write TRANE, La Crosse, Wisconsin.

Here's what you'll see at the Trane "House of Weather Magic" operating display

- ★ **TRANE CENTRAVAC!** 300-ton hermetic centrifugal compressor that meets smaller load requirements by automatically throttling down to *as low as 10% of rated capacity*.
- ★ **NEW UNITRANE!** UniTrane room air conditioners *in operation!* New combination water volume and motor speed controls . . . new reversible coil and drain pans . . . new accessibility. And new, modern cabinets, more compact than ever!
- ★ **MULTIZONE CLIMATE CHANGER.** Heating or cooling for one to six zones from this one TRANE unit. Operate it yourself.
- ★ **KB UNIT VENTILATOR!** See how the revolutionary new Kinetic Barrier Action stops drafts before they start by blanketing walls of glass with a *forced upward flow* of tempered air. New 28" model in operation.
- ★ **UNIT HEATERS!** Horizontal and projection models . . . featuring TRANE's exclusive Louver Diffusers for complete control of heat distribution patterns.
- ★ **COLD GENERATOR!** See it operating with a TRANE Climate Changer. And be sure to see the unique compressor servicing display demonstrating TRANE's *interchangeability* of parts!
- ★ **NEW DELTA-FLO COIL!** Special demonstration proves greater efficiency of the new Delta-Flo Fin.
- ★ **TRANE RADIATION LINE!** Featuring the new Wall Line Convactor.

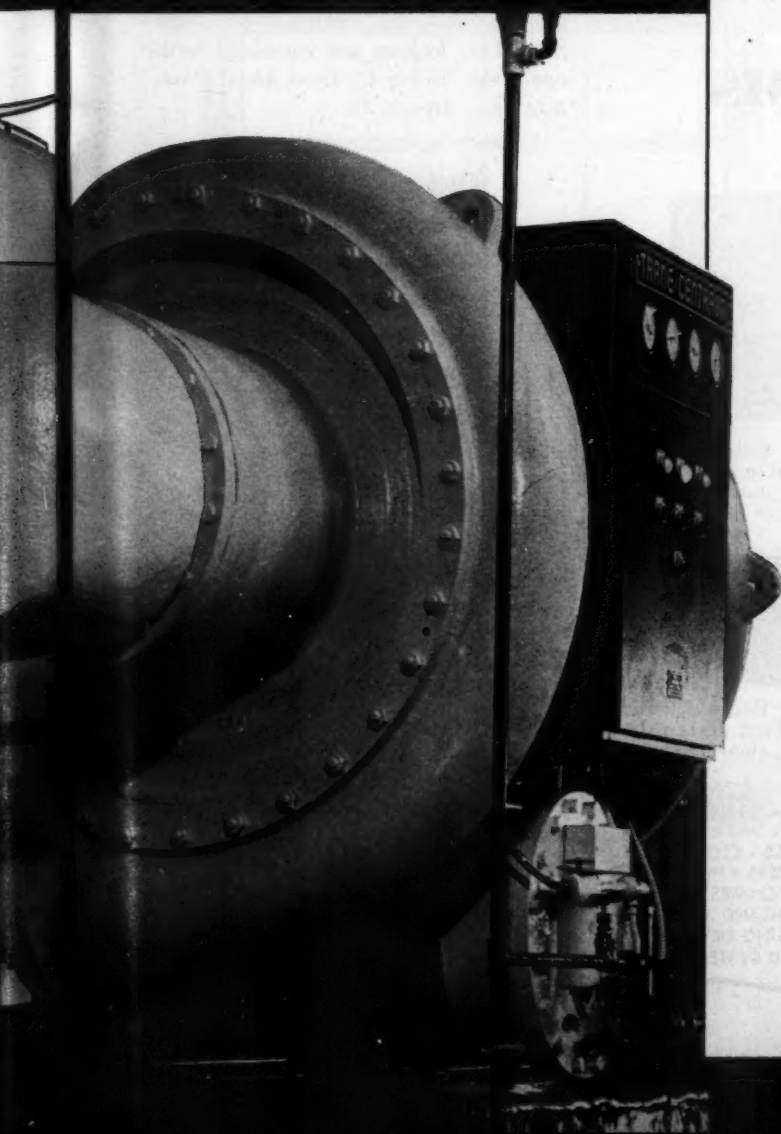
See you at the show!

TRANE

MANUFACTURING ENGINEERS

One source, one responsibility for:
Air Conditioning • Heating • Ventilating
Heat Transfer Equipment

The Trane Company, La Crosse, Wis. • Eastern Mfg. Div., Scranton, Pa.
Trane Co. of Canada, Ltd., Toronto • 90 U.S. and 15 Canadian Offices





FARADAY
®

CODED

FIRE ALARM SYSTEMS

Fast detection of fire—knowing both when and *where* it breaks out—is a secret to minimizing fire losses solved long ago by Faraday Coded Fire Alarm Systems. They not only warn of fire but *locate* it immediately.

For seventy-six years, plants across the country have been warned—in *time*—by Faraday. Through these years, Faraday has designed systems for plants of all sizes and solved hundreds of special alarm problems. For dependable fire warning systems, consult with Faraday. No obligation. Write for details.



Flush Pull Door. Stations also supplied in break-glass, semi-flush surface types, for indoor or outdoor installation.



Fire Alarm Bell of Underdome Uni-Pact design. Insures sharp, clear bell tone.

HOLTZER · CABOT · FARADAY · STANLEY & PATTERSON
Consolidated by:

SPERTI FARADAY INC. ADRIAN, MICH.

SPERTI FARADAY OF CANADA, LTD., MONTREAL, QUEBEC

FARADAY
BELLS · CLOCKS
BUZZERS · HORNS
CHIMES
VISUAL AND AUDIBLE
PAGING DEVICES
AND SYSTEMS

A-EH PRODUCTS

(Continued from page 210)

MORE GYMNASIUM EQUIPMENT

LOCKERS are designed so that the least possible space can be utilized to serve the largest number of students. Most modern units combine a group of small individual lockers with one wardrobe locker. Each student is assigned a separate small locker in which he keeps his gym clothes. When he uses the gym, he hangs his street clothes in the wardrobe locker in his unit and locks it with the padlock from his small locker.



Six 20-in. lockers are combined with one 60-in. locker by *Lyon Metal Products, Inc., Aurora, Ill.*



In addition to combination lockers, basket racks, in which baskets with students' clothing are placed in racks and padlocked, are produced by *Republic Steel Corp., Berger Mfg. Div., 1038 Belden Ave. N. E., Canton 5, Ohio.*

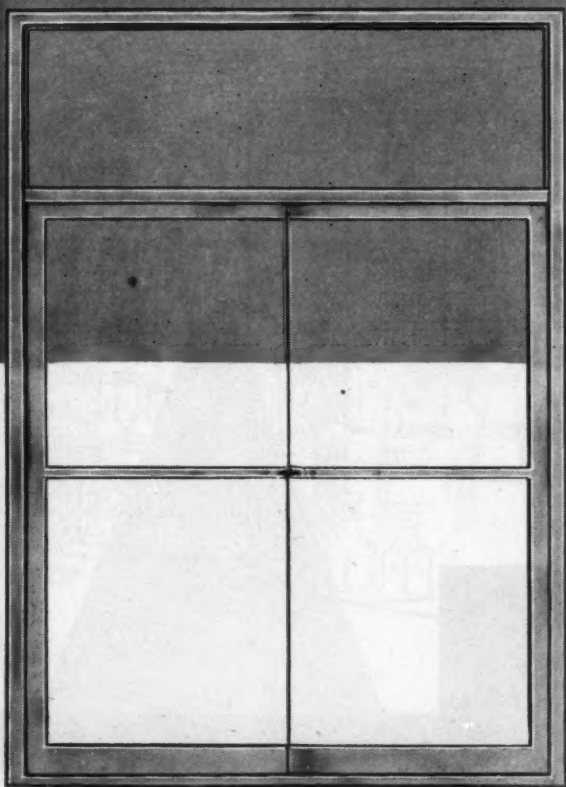
SHOWER STALLS are designed into most gymnasium plans. Circular units, with up to five stalls, and corner units for wasted corner space release wall space for other fixtures. *Bradley Washfountain Co., N. 22nd and W. Michigan Sts., Milwaukee 1, Wis.*

(Gymnasium Equipment cont. on page 218)

Schacht DOORS

GIVE LONGER WEAR
WITH LESS CARE

Schacht FULITE *Schacht* TWINSTILE



Also Available in Bronze



ALL STAINLESS STEEL

DOORS & FRAMES

SCHACHT ASSOCIATES, INC.

1175 E. 156th Street

New York 59, N. Y.

see our catalog in
ARCHITECTURAL
FILE
or write for copy

Write for Stanpat sections. They simplify your blueprints and specifications. No obligation.

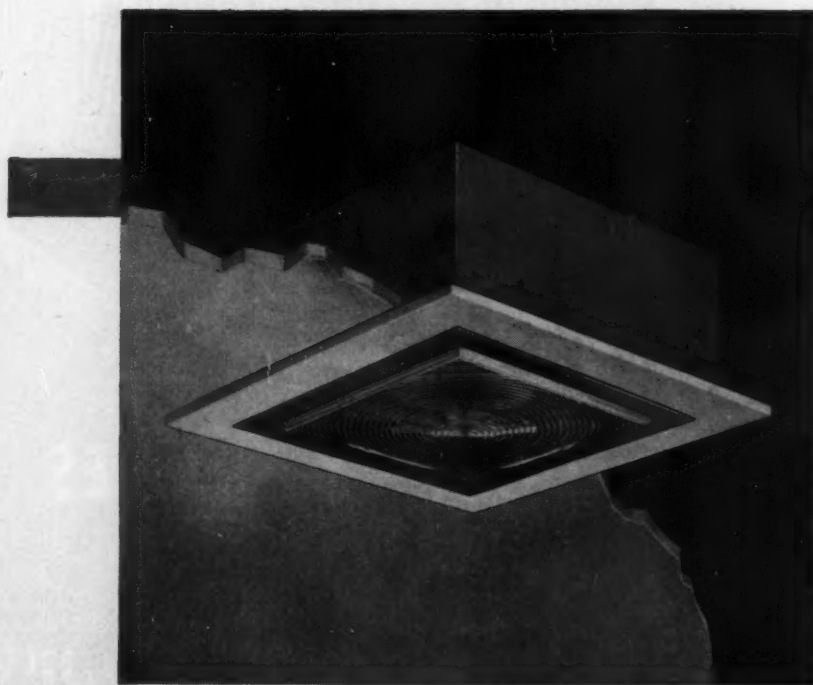
true color SELLS MERCHANDISE

Clear, prismatic Amcolens with its high light transmission in ELIPTISQUARE allows merchandise to reflect true color values—providing the color accent that does a dynamic selling job.

ELIPTISQUARE supplies the general area lighting and ELIPTICONE, the other half of the merchandising pair, delivers the "punch" of attractive high-lighting for featured goods.

This merchandising pair combines to provide modern store lighting . . . making goods look better and sell faster.

Here is sales-producing incandescent lighting at its best!



ELIPTISQUARE

Merchandise lighted with ELIPTISQUARE'S clear, prismatic Amcolens reflects its true color value. For general area lighting, advanced ELIPTISQUARE recessed and surface units provide highest light transmission efficiency.



ELIPTICONE

For the optimum in accent lighting, ELIPTICONE delivers the unusual in shielded, recessed and surface illumination. Complete absence of brightness, from any normal viewing position, on the visible surface of ELIPTICONE, creates a dramatic unawareness of the light source.

THE **ART METAL** COMPANY

CLEVELAND 3, OHIO

(Continued from page 214)

FOLDING PARTITIONS provide flexibility in gymnasiums. With partitions closed, separate gyms are created for two or more gym classes or for two or more different types of recreation. With the partition folded, the full gym area is opened for competitions. A sound-proof automatic electric partition is manufactured by *Horn Div., The Brunswick-Balke-Collender Co., 623 S. Wabash Ave., Chicago 5, Ill.*

SCOREBOARDS are electric and have automatic controls for scoring and timing. Many have clocks and automatic horn controls. Color is used in scoring lights, and the numbers are large enough to be read easily. Many models are manufactured for different installations: one-sided, two-sided and four-sided, both wall-attached and suspended.

The *Scoremaster* scoreboard can be mounted either by chain or by bracket. *M. D. Brown Co., 2207 Lake St., Niles, Mich.*

Naden & Sons Electric Scoreboard Co., Webster City, Iowa, supplies either single or dual controls with its scoreboards.

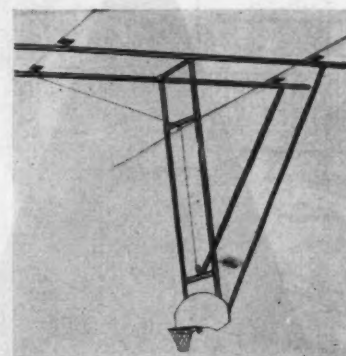


The single-sided scoreboard shown above is manufactured by *Fair-Play Mfg. Co., 73 Thayer St., Des Moines 15, Iowa.*

FLOORING in gymnasiums must not only be tough in order to withstand constant hard use, but must also have a high resiliency factor.

Ironbound, a continuous strip hardwood flooring with steel spline, is produced by *Robbins Flooring Co., Reed City, Mich.*

In addition to finishes and treatments for gymnasium floors, *Hillyard Chemical Co., St. Joseph, Mo.*, offers three folders with plans for laying out gymnasiums.



BASKETBALL BACKBOARDS can be either wall-attached or movable to fit any gymnasium. The suspended type pictured above is swung up by cable when not in use. *Game-Time, Litchfield, Mich.*

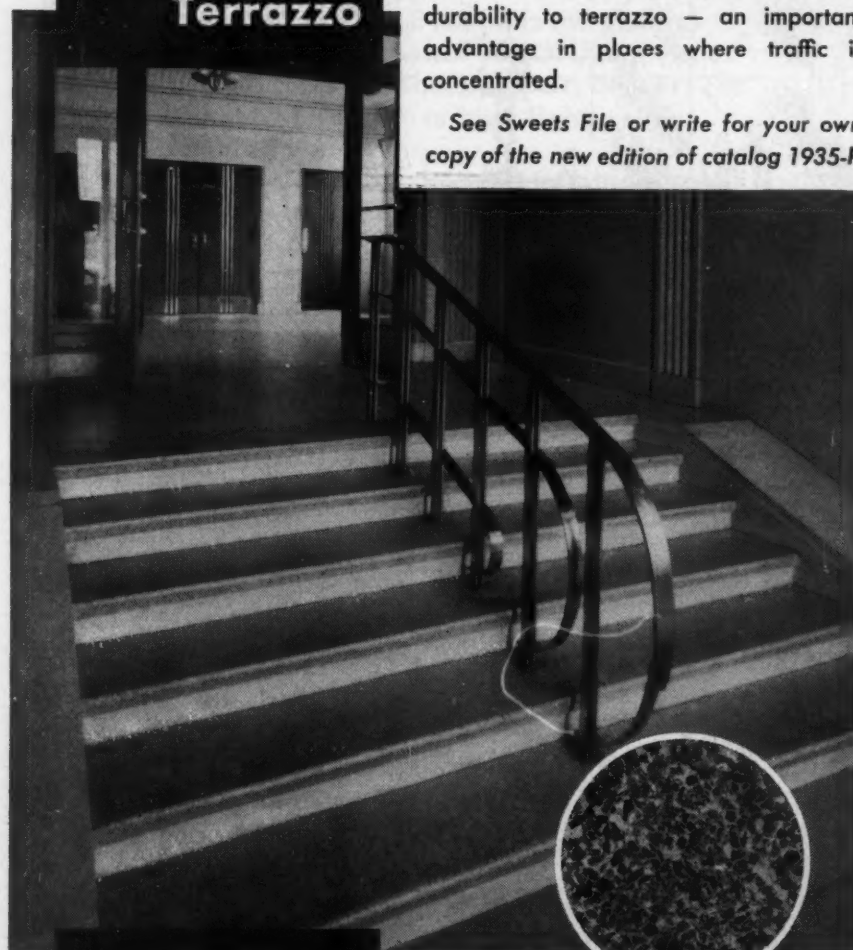
GRILLES for supplying air to gymnasiums must be rugged to withstand the abuse of bouncing basketballs and baseballs and the kicks and bumps of students. They must also be smooth, so that no sharp points or corners will injure students who bump into them. Two models, one with just a grille face and another with attached volume controller with extruded aluminum louvers, are produced by *Titus Mfg. Corp., Waterloo, Iowa.*

(Products continued on page 222)

ALUNDUM aggregate widens the field for Terrazzo

A non-slip walking surface, wet or dry — that's what you get with ALUNDUM aggregate in terrazzo. In fact, it makes possible the architectural advantages of terrazzo in many places where regular terrazzo might not be practical — where floors are wet, on stairways, on ramps. ALUNDUM aggregate also adds durability to terrazzo — an important advantage in places where traffic is concentrated.

See Sweets File or write for your own copy of the new edition of catalog 1935-R.



NORTON
NON-SLIP AGGREGATE

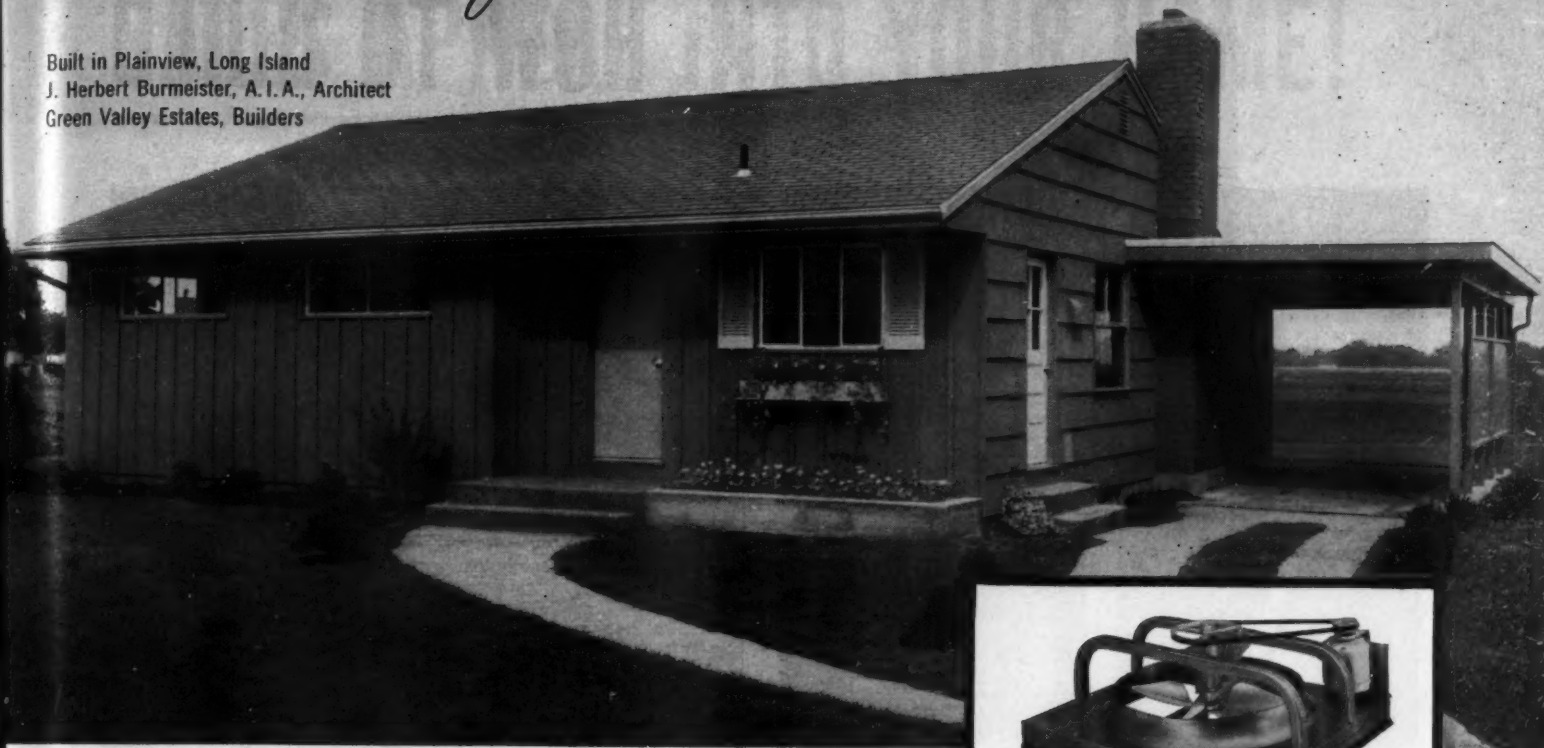
★ **NORTON COMPANY** ★
WORCESTER 6, MASSACHUSETTS

T-508

Making better products...to make your products better

HOUSE BEAUTIFUL'S "Guide *for the* Bride" House

Built in Plainview, Long Island
J. Herbert Burmeister, A. I. A., Architect
Green Valley Estates, Builders



Comfort at low cost with Hunter Attic Fan



Comfort blends with beauty
in "The Bride's House."

Hunter Attic Fan gives carefree cooling pleasure all summer long. Automatic shutter harmonizes with modern interior of home. The compact Hunter Attic Fan assembly rests on attic floor, requires less than 18" clearance. When fan is turned on, hot air exhausts through attic louvers. Cool, fresh outside air is pulled through open windows and sliding terrace door, causing house temperature to drop 10 to 20°.

■ "The Bride's House," a contemporary ranch-style home, is described as a "thoughtful" house.

Feature after feature, from the smartly designed exterior to the refreshingly cool interior (made possible by a Hunter Attic Fan) lends a touch of luxury living at common sense price.

The choice of the Hunter Attic Fan is one more indication of the growing preference for the one attic fan that gives you all four of these features:

1. **Low Initial Cost**—Quality is never sacrificed in any Hunter Fan. Yet the Hunter Attic Fan is available at lowest possible cost.
2. **Fits Any Home**—There's a Hunter Attic Fan for every home, every

climatic condition. Five sizes available, with certified ratings from 4700 to 16,000 CFM.

3. **Ease of Installation**—The compact and easy-to-install Hunter unit is complete with automatic ceiling shutter and all accessories. No extras to build or buy.

4. **Dependable Service**—You can rely on Hunter's 69-year record of experience in cooling and ventilating fans. It is your assurance of highest quality products, maximum performance and minimum care.

See why more and more architects and builders prefer Hunter Package Attic Fans. Write today for your free copy of "Cool Every Room With A Hunter Attic Fan."

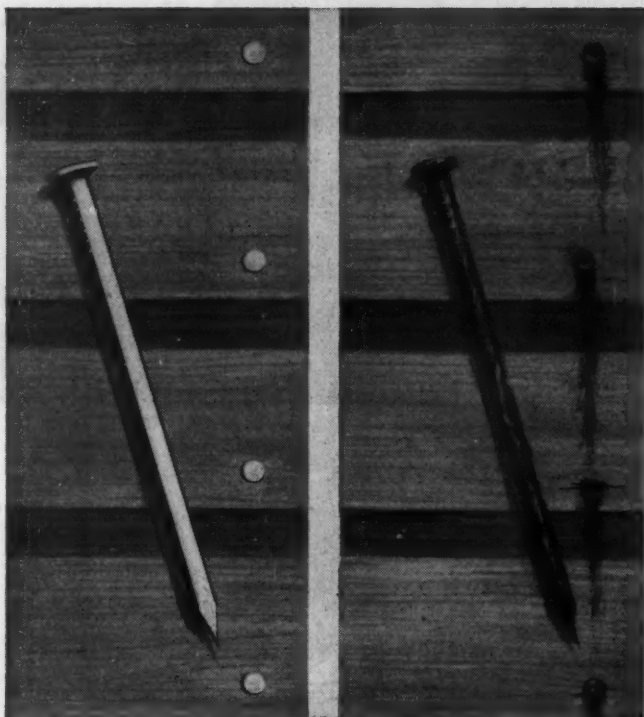
See our Catalog in Sweet's File

HUNTER

 *Package Attic Fans*

HUNTER FAN AND VENTILATING COMPANY
396 S. Front St., Memphis 2, Tenn.

HOW TO BUILD



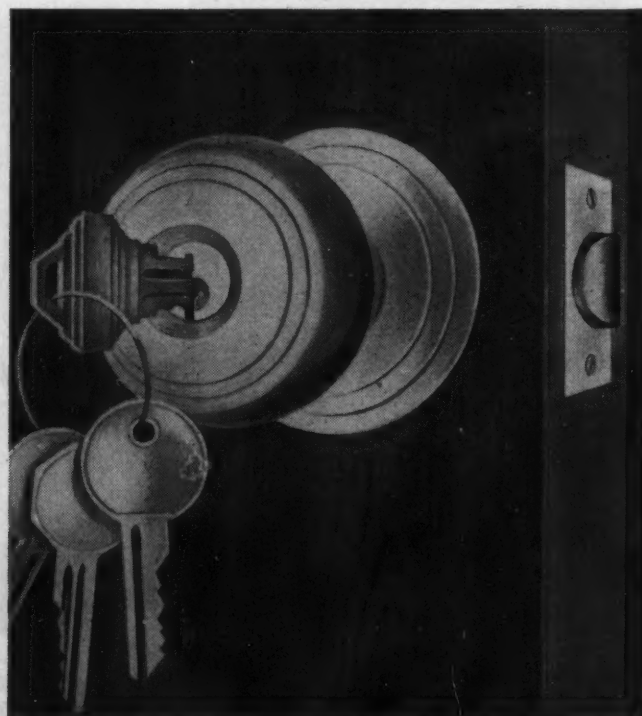
Aluminum nails add sales appeal because they never "rot out"...never cause ugly red rust streaks on siding to mar exterior beauty.



Aluminum wall tile adds sales appeal because it won't chip or crack. Won't rust. Modern flat appearance. Light in weight and easy to install.



Aluminum foundation vents add sales appeal because they require no painting or other maintenance. Never develop ugly red rust stains.



Aluminum locks and keys add sales appeal because their bright, modern appearance is a credit to any house. Tough, solid aluminum lasts a "house-time."

SALES APPEAL INTO YOUR HOME!



Aluminum shower doors add sales appeal because they maintain their shining good looks under hardest usage. Corrosion-resistant. No rust stains.



Aluminum garage doors add sales appeal because their light weight makes them easy to open and close. Clean, handsome appearance. Strong, durable.

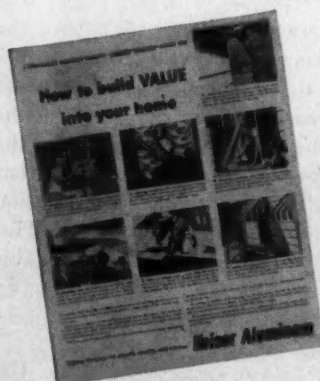
YOUR speculative houses are *easier to sell* when you use *aluminum* building products. That's because aluminum products are usually associated with quality houses.

Among aluminum's advantages are light weight, strength, corrosion resistance, economy, modern beauty.

As a basic producer of aluminum, we do not make any of the products shown here. Our efforts are put behind the job of serving manu-

facturers—to help improve their products and reduce costs.

Engineering assistance is available from our qualified aluminum engineers. Or for names of building products manufacturers who will be glad to work with you, contact the Kaiser Aluminum sales office listed in your telephone directory. Kaiser Aluminum & Chemical Sales, Inc. *General Sales Office*, Palmolive Bldg., Chicago 11, Illinois; *Executive Office*, Kaiser Bldg., Oakland 12, California.



Kaiser Aluminum

setting the pace—in growth, quality and service

◀ Kaiser Aluminum helps build demand for aluminum building products like these through consistent, colorful advertising in national magazines like *Saturday Evening Post* and *Time*.

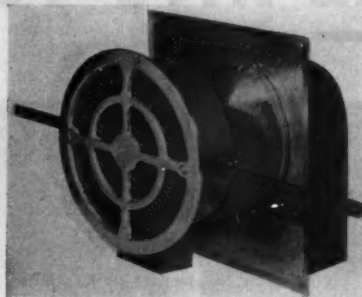
(Continued from page 218)

CAULKING COMPOUND

• A synthetic rubber caulking compound, *Del* is designed for filling cracks or holes on almost any surface and for joining or sealing wood, metal, masonry or glass. It is a black paste compound which reportedly cures without shrinking to a permanent, flexible-rubber solid form when an activator or catalyst is added. *David E. Long Corp.*, 220 E. 42nd St., New York 17, N. Y.

VENTILATING FANS

• Kitchen ventilating fans have been introduced in three new models. The model shown below, 127-W, is a wall



exhaust unit adaptable to walls 5 to 10 in. or 9 to 14 in. thick and has a 500 cfm free air rating. A shutter in the outside assembly opens automatically when the fan is turned on and closes when it is turned off. Models 1210 and 1510 are ceiling exhaust units with free air ratings of 700 and 1000 cfm, respectively. *Phoenix Fan & Blower Mfg. Co.*, 112 So. 8th Ave., Phoenix, Ariz.

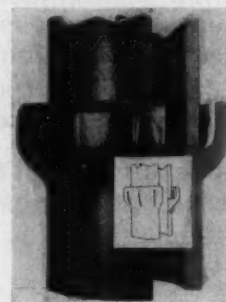
WOOD PANELS

• Large-size *Novoply*, a three-ply all-wood board, with a core of medium-sized wood chips faced on either side by a 1/16-in. layer of wood veneer flakes formed into a panel under heat and pressure, is now produced in 4- by 16-ft panels 3/4 in. thick. In this dimension the panels can be used as one-piece cores for counter fronts and for veneered sink tops and work surfaces of long lengths. *U. S. Plywood Corp.*, 55 West 44th St., New York 36, N. Y.

PLASTIC SHEETING

• *Ceilite*, a translucent plastic sheeting, is available in corrugated or flat sheets. Resistant to most acids, alkalies and industrial fumes, this shatterproof, non-combustible, lightweight material is produced both translucent and opaque and in a wide range of colors. It is available in standard corrugation sizes up to 40 by 144 in., in flat sheets up to 36 by 96 in. and in standard window glazing sizes. *Ceilite Corp.*, Box 278, Allison Park, Pa.

CLAY PIPE JOINT



• A mechanical clay pipe joint, a putty-type joint based on the ball and socket principle, consists of a plastic ring die-cast electrically both in the bell of the pipe having a concave exposed surface and on the spigot having an exposed convex surface. The diameter of the spigot ring is somewhat larger than the largest diameter of the bell ring, so that the rings are in constant compression when they are pushed together. This rubber-like *Amvit* joint makes it possible for the line to be 14 deg off center. *American Vitrified Products Co.*, Cleveland, Ohio.

Cheerful, Comfortable INTERIORS Beautiful, Modern EXTERIORS !

GIVE YOUR CLIENTS
BOTH WITH



Peterson

HORIZONTAL SLIDING Aluminum Windows

Check These Outstanding Features

ROLLS OPEN

Easy horizontal operation, precision bearing rollers.

SAVES MAINTENANCE

Requires no paint. Won't rust, swell, warp, stick or rot.

WEATHERPROOF

Hi-pile, water and wear resistant weatherstripping cuts heating costs.

SMART STYLING

Enhances all motifs.

EASILY CLEANED

Sliding sash removes into room for easy washing.

SAFE

Positive locking in closed, one, two and three inch open positions.

ADVANCED DESIGN

Eliminates putty, sash balances, cranks, hinges.

FURNISHED COMPLETE

Built-in storms and screens, if desired.

50 STANDARD SIZES

All designs and sizes popularly specified for residential, commercial and monumental buildings supplied promptly. Standard windows up to 6' in height and 10' in width are available. Special sizes can be obtained at slightly higher cost. Constructed of sturdy aluminum extrusions—63S-T5 Alloy, minimum thickness .062"—engineered for maximum strength.

PETERSON

WRITE FOR
LITERATURE AND NAME
OF NEAREST DEALER

Peterson Window Corp.

1383 E. EIGHT MILE ROAD
FERNDALE 20, MICHIGAN

INQUIRIES FROM INTERESTED DEALERS ARE INVITED

(Continued on page 224)

Another of the nation's largest housing projects heated by **FITZGIBBONS**

● The modern and immense
Capt. Wendell Oliver Pruitt Homes,
St. Louis, Mo. will be heated by
12 Fitzgibbons "D" Type firebox
steel boilers. It's another case of
"the best in steel boiler heat"
for the big jobs.



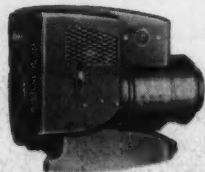
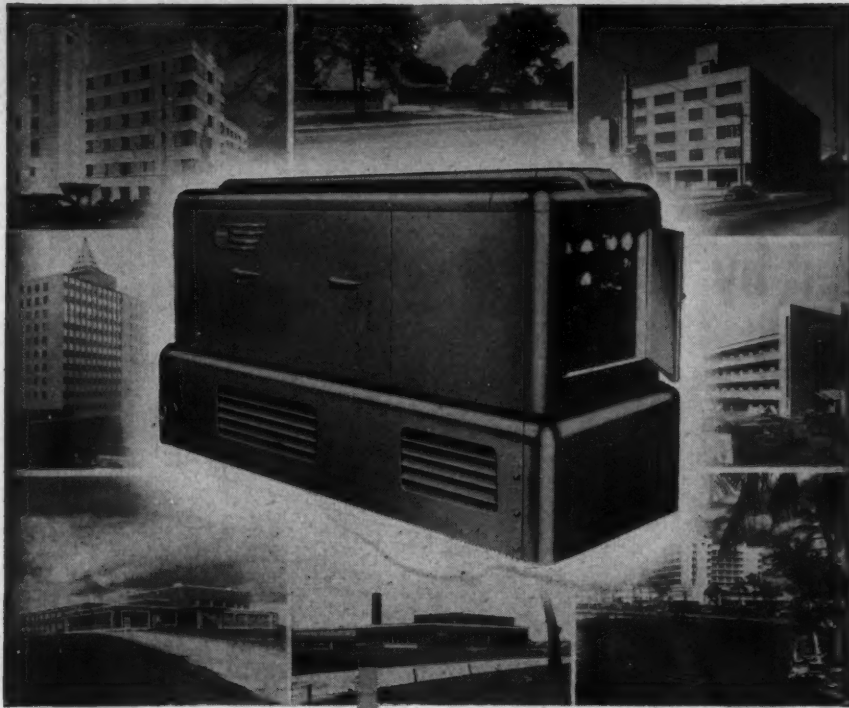
Fitzgibbons Boiler Company, Inc. **SBI**

NEW YORK, N.Y.

Hoffmuth, Yamasaki & Leinweber, Architects—St. Louis, Mo.
John D. Falvey, Consulting Engineer—St. Louis, Mo.
Kremer-Nicks Company, Mechanical Contractors—St. Louis, Mo.
Millstone Construction, Inc., Contractors-Engineers—St. Louis, Mo.

See the new improved "D" Type Boiler
Booth 525-531
Heating & Ventilating Show, Philadelphia, Pa.

ONAN Standby Electric Power for any building you design...



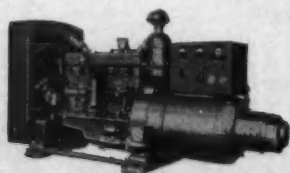
Model 305CK — 3,500 watts A.C.



Model 10CW — 10,000 watts A.C.



Model 25HN — 25,000 watts A.C.



Model 50KA — 50,000 watts A.C.

Even the most modern buildings become unsafe when electric power is interrupted. Lives and property are endangered.

With an Onan Standby System, any interruption of highline electricity automatically starts the emergency electric plant and within seconds all essential equipment is operating normally. In many instances just one power interruption will justify the cost of the standby power installation.

Hospitals, homes, schools, churches, hotels, radio stations, stores, offices... all modern buildings need standby protection. Onan builds units to meet any requirement... 1,000 to 75,000 watts, gasoline engine powered.

Write for Architects' Kit SP-2627

Contains specifications for all standby models and information on installation.

D. W. ONAN & SONS INC.

2627 Univ. Ave. S.E., Minneapolis 14, Minnesota

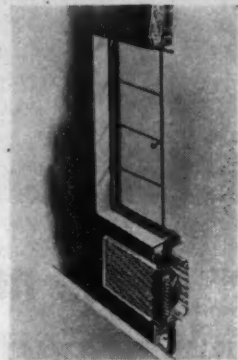


First... in Standby Electric Power

A-E PRODUCTS

(Continued from page 222)

AIR CONDITIONERS



• A built-in room air conditioning unit fits into a wall like a radiator, thus eliminating the half-open window required for the conventional window-type unit. Measuring about 18 by 30 in., the unit is approximately as deep as the thickness of a building wall, as shown in the cutaway drawing above. Practically no part of the grill penetrates into the room. The new units will be manufactured in various capacities exclusively for builders of apartment houses, motels and private homes. *Lewyt Corp., 60 Broadway, Brooklyn 11, N. Y.*

• An automatic home air conditioning system which permits cooling to be directed into any room by means of pushbutton operation is being produced for modest-sized homes. The Co-Mac-Co utilizes a hot-water boiler for heating and a refrigerated water chiller for cooling, with installation costs about 20 per cent more than for conventional window coolers of the same size. *Co-Mac-Co Heating and Cooling Co., 5873 Franklin Ave., Los Angeles, Calif.*

DOWNBLOW HEATER



• A downblow unit heater has a motor and fan which can be removed by loosening four bolts. A die-formed full venturi provides what is believed to be the quietest operation on the market. The Unarco downblow heater can be had with outputs ranging from 40,000 to 580,000 Btu. *Union Asbestos and Rubber Co., Heating and Cooling Div., 332 So. Michigan Ave., Chicago, Ill.*



The perfect blending of natural wood walls, beamed ceilings and Mosaic Faience Tile—in cool-as-mint green!



Easy-to-clean Ceramic Mosaic Tile floor in living-kitchen. For that extra touch of beauty in use . . . the Ceramic Mosaic range hood and a table top of decorated Mosaic Tile.



Weather, sun and moisture-resistant window sill of 1" x 1" Faience Mosaic Tile in Lippincott bedroom. Convenient! Permanent! Beautiful!

*noted designer
dramatizes own home
with **Mosaic Clay Tile!***

Tile Contractor: National Tile & Marble Corp., New York
Photo: Maynard Parker



MOSAIC
1954 Our Sixtieth Year

Designer J. Gordon Lippincott's new Scarsdale, N.Y. home is a glowing exhibit of Mosaic Clay Tile in trend-setting uses. In room after room, Mr. Lippincott gave voice to his creative imagination with the modern beauty and texture of this timeless material. You, too, will find inspiration in Mosaic Clay Tile.

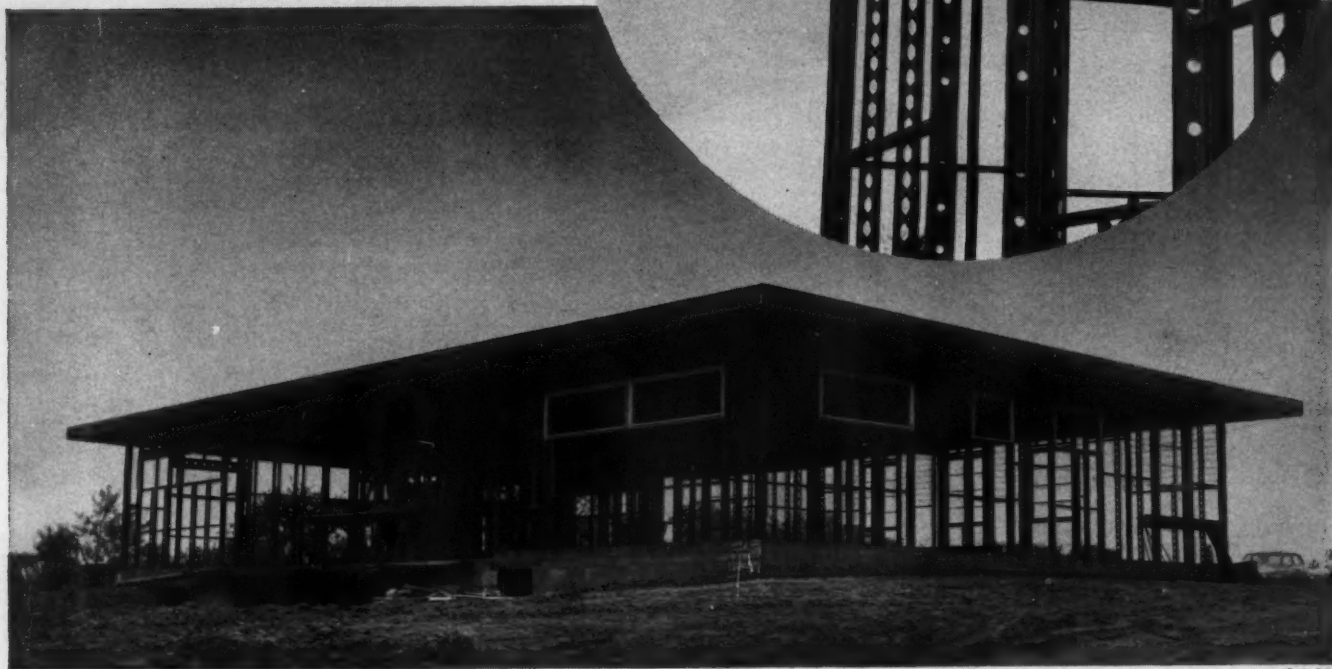
For helpful literature on the many types of Mosaic Clay Tile, write Dept. 30-25, The Mosaic Tile Company, Zanesville, Ohio. "The Tile Handbook," published by the Tile Council of America, will help you specify. And remember—you and your clients are always welcome at our showrooms and at those of your Tile Contractors.

THE MOSAIC TILE COMPANY

Member—Tile Council of America and The Producers' Council, Inc.
Offices, Showrooms and Warehouses across the Nation
Over 4000 Tile Contractors to serve you

OFFICES: Atlanta-Baltimore-Boston-Buffalo-Chicago-Dallas-Denver-Detroit-Fresno-Greensboro-Hartford-Hempstead, L. I., N. Y.-Hollywood-Little Rock-Miami-Milwaukee
Minneapolis-New Orleans-New York-Philadelphia-Pittsburgh-Portland-Rosemead, Cal.-Salt Lake City-San Antonio-San Francisco-Seattle-St. Louis-Tampa-Washington, D. C.-Zanesville

How to build a "LUXURY" HOUSE for \$8 to \$10 a ☐



Framing for new home of Lewis R. Berry at Hanover, New Jersey

PM-58

Here is a seven-room, two-bath, ranch-style house, photographed during erection. The completed structure, which is top quality throughout, cost less than \$23,000 to build.

The "key" to this low-cost luxury house is Penmetal LIGHTSTEEL structural sections. These sections are scientifically engineered for easy fabrication and erection. That is why you save in construction costs.

Joists, studs, track and bridging are designed to fit together for ease of assembly and welding in the shop or at the job site. Because of the light weight of the sections, complete wall units can be readily trucked to the job site where they can be erected in a few minutes. Precisely engineered openings in sections reduce cost of installing wiring

and plumbing. These openings are also used for tying metal lath to the sections.

The finished house is firesafe, termite proof and virtually maintenance free.

LIGHTSTEEL houses are not mass produced; they are built to your own drawings and specifications. For further information, send for new 16-page illustrated catalog.

PENN METAL COMPANY, INC.

General Sales Office:

205 East 42nd Street, New York 17, N. Y.

Plant: Parkersburg, W. Va.



CONSTRUCTION DETAILS

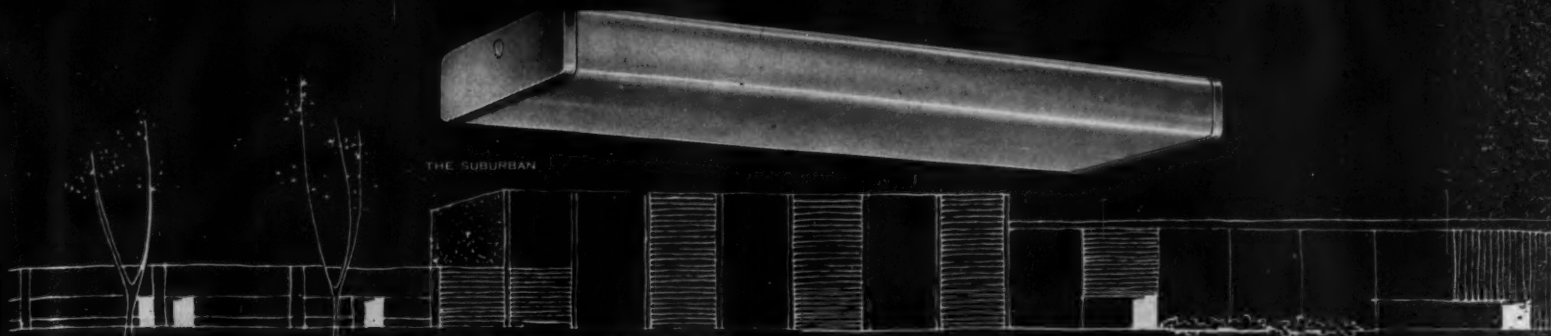
OVERALL DIMENSIONS—
62' x 36'.

FRAMING— Penmetal
LIGHTSTEEL structural sections.

**EXTERIOR WALL CON-
STRUCTION—** 3/4" rib lath
covered by two coats of
Portland cement, and a fin-
ish coat of Oriental stucco.

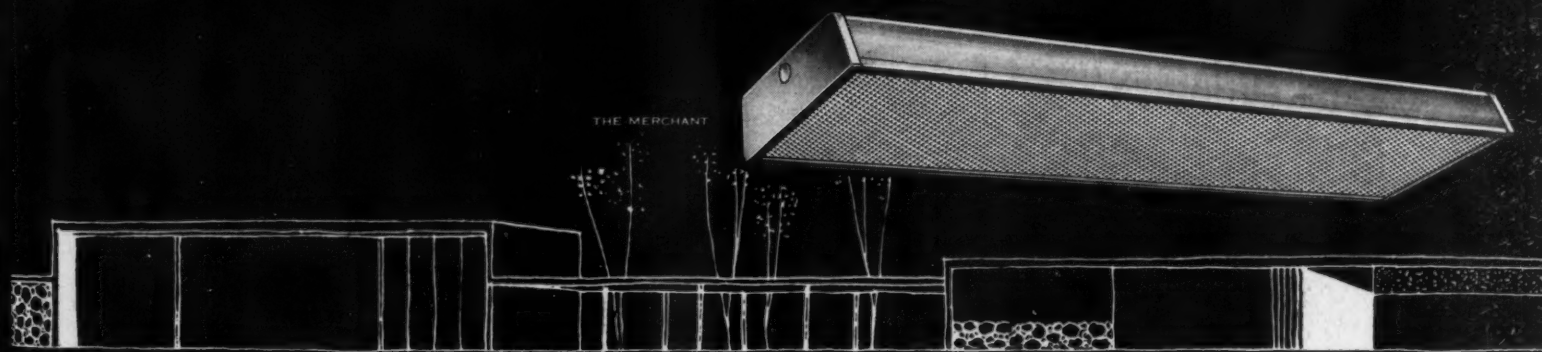
**INTERIOR WALL CON-
STRUCTION—** Plaster over
3/4" rib lath.

INSULATION— 2 1/2" cavity
between interior and ex-
terior walls filled with as-
phalt emulsion containing
fiberglass and asbestos.



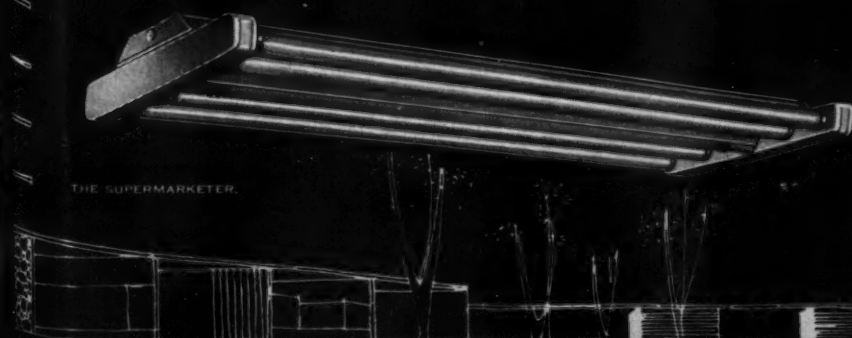
NOW YOU CAN PLAN LIGHTING THAT IS DESIGNED FOR MODERN SHOPPING

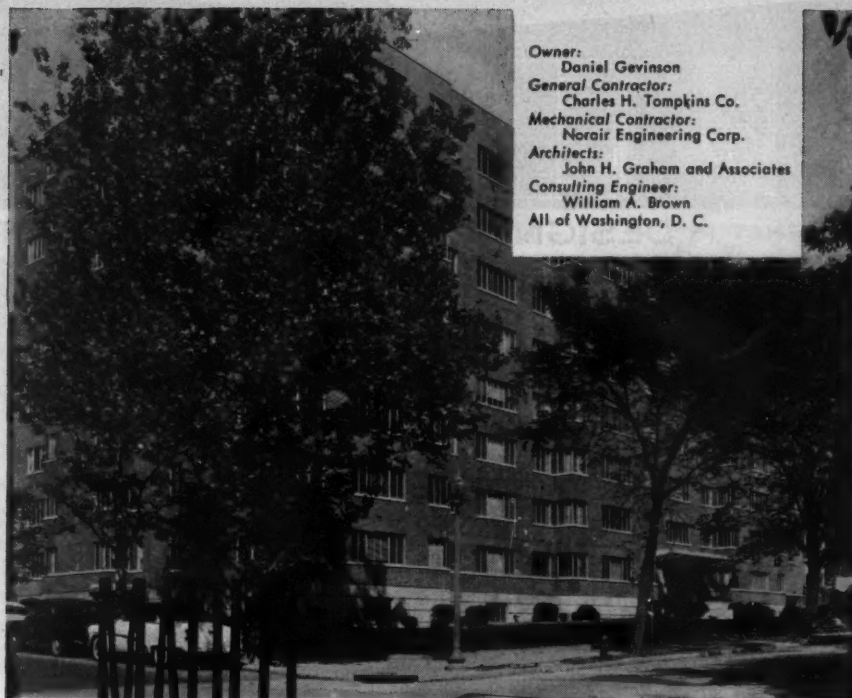
FOR STORES OF ALL TYPES, THIS NEW GROUP OF MILLER
FLUORESCENT STORE LIGHTS MEET THE LIGHTING NEEDS OF
THE NEW STORES YOU DESIGN. OF THE OLDER STORES YOU
ARE MODERNIZING. ARCHITECTURALLY STYLED AND ENGI-
NEERED AS A GROUP, THESE THREE FIXTURE TYPES BLEND
WITH INTERIOR ARCHITECTURE AND DÉCOR AND PROVIDE



EFFICIENT ILLUMINATION, TO POINT UP THE EYE APPEAL
OF MERCHANDISE — AND YET BE UNOBTRUSIVE. APPLICA-
TIONS OF THIS NEW MILLER STORE LIGHTING CONCEPT ARE
PORTRAYED IN A NEW FILE-FOLDER PROSPECTUS, "DESIGNED
FOR MODERN SHOPPING." WRITE FOR IT ON YOUR COMPANY
LETTERHEAD.

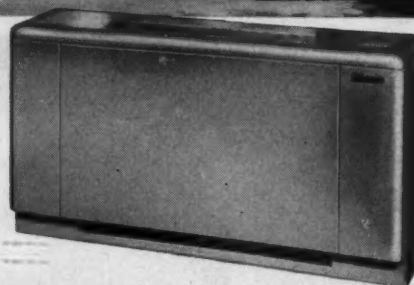
THE MILLER COMPANY, MERIDEN, CONN.





Owner:
Daniel Gevinson
General Contractor:
Charles H. Tompkins Co.
Mechanical Contractor:
Norair Engineering Corp.
Architects:
John H. Graham and Associates
Consulting Engineer:
William A. Brown
All of Washington, D. C.

311 MARLO "SEAZONAIRES" COMFORT-CONDITION



NEW WASHINGTON CIRCLE APARTMENTS

These handsome remote room air conditioning units assure dependable year-round comfort for residents of the smart new Washington Circle Apartments, Washington, D. C.

Styled to harmonize with any interior, Marlo Seazonaires provide delightful coolness in summer, warmth in winter . . . with temperature selected by the guest.

Seazonaires are easy to install. Because of individual operation, they can be turned off when the suite is vacant. And they operate quietly, with a minimum of noise and vibration.

Get the complete facts from Marlo on this modern, practical method of year-round air conditioning for hotels, motels, office buildings and other multiple installations.

See our Bulletin in Sweet's Catalog

	Manufacturers of COOLING TOWERS • EVAPORATIVE CONDENSERS • INDUSTRIAL COOLERS • AIR CONDITIONING UNITS • MULTI-ZONE UNITS • BLAST HEATING & COOLING COILS
	COIL COMPANY

Saint Louis 10, Missouri

AE LITERATURE

(Continued from page 178)

METAL LATH

• *Milcor Metal Lath and Accessories* (16 pp, illus.) has been released as Catalog No. 253 by *Inland Steel Products Co.*, 4035 W. Burnham St., Milwaukee 1, Wis.*

GROUTING

• *Embeco Non-shrink Method of Grouting* describes successful grouting of heavy equipment with Embeco non-shrink mortar. 16 pp, illus. *The Master Builders Co.*, 7016 Euclid Ave., Cleveland 3, Ohio.*

PLASTERING

• *For Greater Security and Greater Profits in Plastering* contains cost-saving and time-saving construction techniques using an E-Z-ON plastering machine. 8 pp, illus. *E-Z-ON Corp.*, 1725 West Pershing Rd., Chicago 9, Ill.

WATER HAMMER

• A discussion of the cure and prevention of water hammer at the design level is presented in a *Water Hammer Engineering Data Book*. 18 pp, illus. *Wade Mfg. Co.*, Elgin, Ill.*

SOUND INSULATION

• *Technical Bulletin No. 11* on sound insulating partitions and floors lists sound reduction ratings and includes details of various assemblies. *Metal Lath Mfgs. Assoc.*, *Engineers Bldg.*, Cleveland 14, Ohio.*

PREFABRICATED WOOD HOUSES

• *Your Gunnison Home* gives illustrations, floor plans and specification data on prefabricated wood houses manufactured by *United States Steel Homes, Inc.*, New Albany, Ind.

FURNITURE

• A 10-page catalog supplement contains photographs, drawings and specifications of contemporary design cabinets and upholstered furniture. *Jens Risom Design Inc.*, 49 E. 53rd St., New York 22, N. Y.

WROUGHT IRON IN SEWAGE

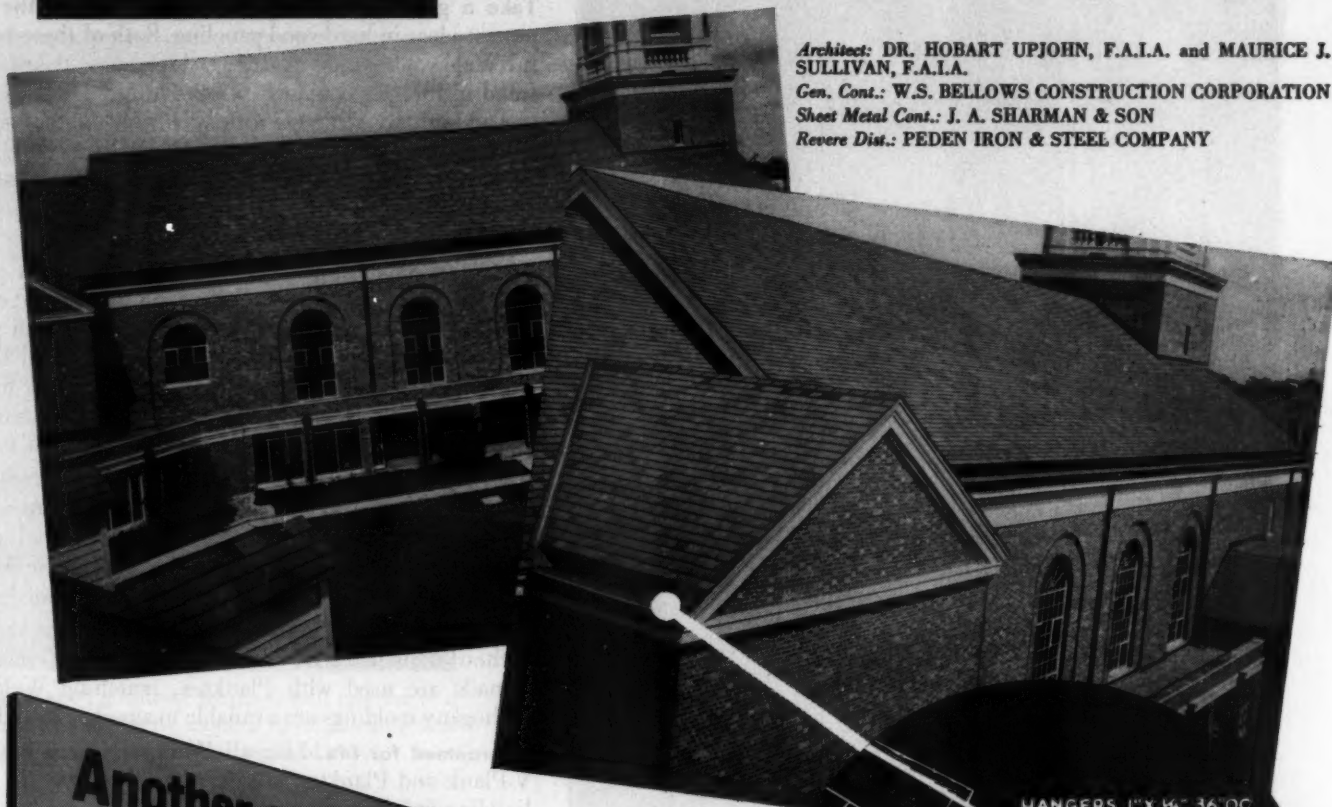
• An illustrated 4-page booklet contains basic reasons for selecting wrought iron in sewage plant services and provides a checklist of applications in which the material is specified. *Engineering Service Dept.*, *A. M. Byers Co.*, Pittsburgh, Pa.

(Continued on page 232)



First Presbyterian Church

HOUSTON • TEXAS



Architect: DR. HOBART UPJOHN, F.A.I.A. and MAURICE J. SULLIVAN, F.A.I.A.

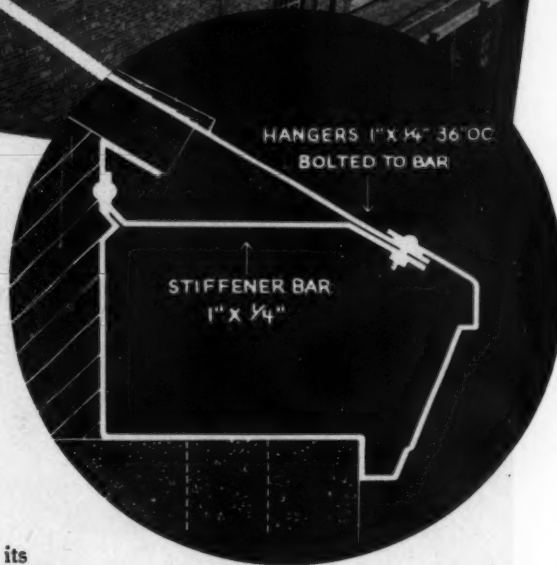
Gen. Cont.: W.S. BELLOWS CONSTRUCTION CORPORATION

Sheet Metal Cont.: J. A. SHARMAN & SON

Revere Dist.: PEDEN IRON & STEEL COMPANY

Another case of
COPPER
where it counts!

COPPER GUTTER DETAIL is shown at right. 24 oz. copper is turned up wall to roof. Stiffener bar is $\frac{1}{4}$ " x 1". Hangers are same size, placed 36" O.C. and bolted to bar. Over 20,000 lbs. of Revere Sheet and Strip Copper were used for gutters, leaders, expansion joints and flashings, with Revere Keystone Thru-Wall Flashing being used in conjunction with the stone work.



• One of the many beauties of copper, from an architect's standpoint, is its versatility, design-wise. Copper is as much at home in the most modern church as it is in an ancient Roman Cathedral. Take, for example, the new, smartly-designed church shown here. Note how the copper box gutter has been made to blend in with the roof line, how neat the stepped-down flashing appears around the steeple and adjoining wall and how the decorative leaders have been designed to become a part of the brick pillars on the lower level.

In addition to its practically unlimited design possibilities copper cannot rust or rot. Its endurance has been proved for centuries. The enviable reputation copper has earned makes it readily acceptable by the toughest board of directors. Contractors prefer to work with it because it solders beautifully, requires no special tools, is readily worked into any shape or form and is readily prefabricated in the shop. Write us today about the money-saving advantages of Revere Keystone Thru-Wall Flashing*. And, if you have technical problems, we will put you in touch with Revere's Technical Advisory Service.

*Patented

REVERE

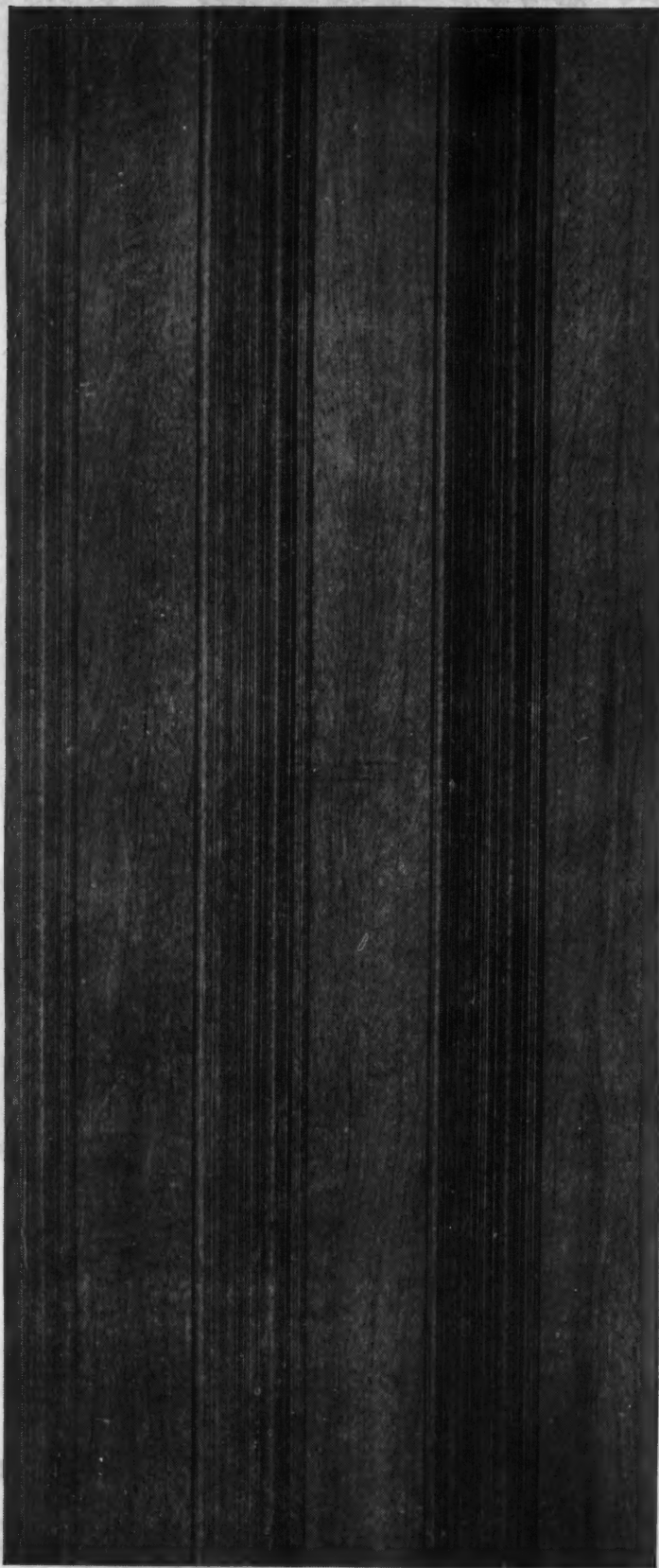
COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

230 Park Avenue, New York 17, N. Y.

Mills: Baltimore, Md.; Chicago and Clinton, Ill.; Detroit, Mich.; Los Angeles and Riverside, Calif.; New Bedford, Mass.; Rome, N. Y. Sales Offices in Principal Cities, Distributors Everywhere.

Two new hardwood panels point up trend



PLANKTEX is a strikingly decorative textured wall paneling for both residential and institutional use. Can be finished natural or stained.

Two beautiful new panels—V-Plank Weldwood and Planktex—join the growing United States Plywood family of pre-finished paneling.

Take a good look—and another—at two of the very newest ideas in hardwood paneling. Both of these beautiful Weldwood panels feature today's most-talked-about trend in interior paneling . . . the *textured* look.

And both are available with Weldwood factory-applied finishes—the finest plywood pre-finishes ever offered. Applied by skilled craftsmen with years of wood-finishing experience, Weldwood pre-finishes actually cost less than on-the-job finishes!

V-Plank Weldwood comes in 4' x 8' x 1/4" thick panels that are vee-grooved vertically with the grain of the wood. Groove-spacing gives effect of random wall paneling. Beveled vertical edges hide butted panel seams. V-Plank is available in a complete range of light to dark woods: Walnut, Korina®, Honduras Mahogany, Samara* and Oak. All are completely pre-finished—even to wax.

Weldwood Planktex 4' x 8' x 1/4" thick panels have 6-inch bands of irregular striations alternating with 6-inch bands of smooth wood. Striations hide butted panel joints. Made of finely grained, inexpensive Philippine Mahogany, Planktex is available unfinished or pre-finished.

Both V-Plank Weldwood and Planktex can be installed without nails using new Weldwood Contact Cement. Or if nails are used with Planktex, matching Weldwood Mahogany moldings are available to simplify installation.

Guaranteed for life. Like all Weldwood paneling, both V-Plank and Planktex are *guaranteed for the life* of the building in which they are installed!



STRIATIONS IN PLANKTEX contrast vividly with alternating stripes of smooth surfaced wood. Each sheet has 4 bands of striations and 4 bands of smooth wood.

toward textured look



V-PLANK ADDS a note of textured wall interest to a room with a distinctly modern flavor. Shadow line of grooves adds to apparent height of room.



PRE-FINISHED PLANK. **WELD**† has an attractive plank effect, too! Narrow 16¼" wide by 8' high panels add wall interest—and there are no nail holes to putty! Panels overlap to conceal nailed clips holding panels in place. Plankweld comes in six fine woods: Birch, Oak, Korina, Honduras and Philippine Mahogany and Walnut—all with expert, Weldwood factory-applied finishes.

†Reg. and Pat. Pending



GROOVES IN V-PLANK WELDWOOD are spaced like this to give a random paneling effect: 6", 4", 6"; 9", 7"; 4", 8" and 4". Note that a groove occurs every 16", hiding nails when the material is nailed to studs.



Weldwood®

V-PLANK* and PLANKTEX*

Products of

UNITED STATES PLYWOOD CORPORATION

World's Largest Plywood Organization

and **U.S.-MENDEL PLYWOODS, INC.**, Louisville, Kentucky

In Canada: Weldwood Plywood Ltd., Montreal and Toronto

*Trade Mark

SEND COUPON for complete details on these and other Weldwood hardwood panels such as Plankweld, or visit any of the 73 United States Plywood or U.S.-Mengel Plywoods showrooms in principal cities.

UNITED STATES PLYWOOD CORPORATION		AR-1-55
Weldwood Building		
55 West 44th Street, New York 36, New York		
I'd like to know more about V-Plank and Planktex () Plankweld () other Weldwood hardwood paneling (). Please send me complete details.		
NAME		
ADDRESS		
CITY STATE		

THIS COUPON BRINGS YOU NEWEST DATA ON HANGARS AND DOORS
FOR EVERY AVIATION NEED

INTERNATIONAL STEEL COMPANY • AVIATION DIVISION
2002 Edgar Street, Evansville 7, Indiana

Send me without obligation my personal copy of
☐ Airport Structures Facts Book ☐ Doors for Aviation

NAME AND POSITION _____
 FIRM _____
 ADDRESS _____
 CITY _____ ZONE _____ STATE _____

Whatever the need...

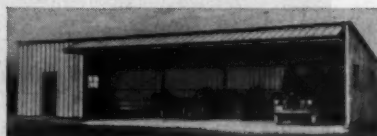
Whatever the requirements for hangars or hangar doors, International can meet them with maximum speed and economy. Whenever planning such projects — whether for airport or aircraft plant usage — International's engineers will welcome the opportunity to work with you. Mail coupon now.



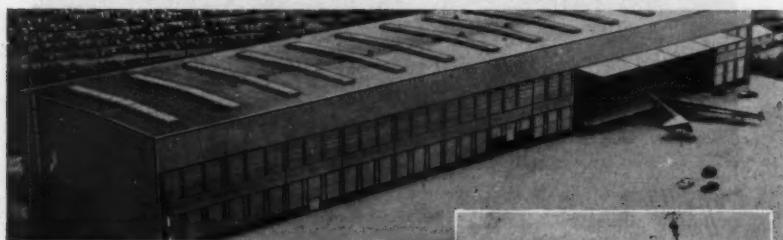
MUL-T HANGARS: Sturdy, profitable housing for smaller planes. Can be quickly erected at low cost, combined in any number of units and arrangements. Exclusive BI-FOLD CANOPY DOOR gives long, trouble-free service under all climatic conditions.



ALL-STEEL HANGARS: Every type and size — standard or custom designed.



UTILITY BUILDINGS: Highly efficient units for many shop or storage uses.



ABOVE: INTERNATIONAL TELECANOPY DOORS at Boeing B-52 Flight Hangar, Seattle — world's longest entrance of its type. **RIGHT: STRAIGHT SLIDE DOORS** built by International. Non-jamming. No space needed for outside track. Smooth, safe in operation.



AVIATION DIVISION • 2002 EDGAR ST., EVANSVILLE 7, IND.

INTERNATIONAL STEEL COMPANY

ATE LITERATURE

(Continued from page 228)

ROOFING ACCESSORIES

• *Copings and Gravel Stops* offers specifications, installation information and illustrations of newly designed aluminum roofing accessories. 17 pp. Aluminum Co. of America, 1501 Alcoa Bldg., Pittsburgh 19, Pa.*

INSULATION

• Principal applications, installation procedures and important properties of vermiculite insulation are described in *Form HI-48* from Zonolite Co., 135 S. LaSalle St., Chicago 3, Ill.*

KITCHEN RANGES

• A chart showing which manufacturers are producing one or more gas ranges having some special feature is available through the American Gas Assoc., 420 Lexington Ave., New York 17, N. Y.

• Specification sheets giving dimensions and features on *Hotpoint Customline automatic range ensembles* and *Hotpoint standard 1-hp air conditioner* are offered by General Electric Supply Co., 585 Hudson St., New York 14, N. Y.*

DOOR SLIDE ATTACHMENTS

• Two slide selector charts give descriptive information in tabular form plus dimensional data on the selection of the proper slide and slide attachments. *Grant Pulley & Hardware Corp.*, 31-85 Whitestone Pkwy., Flushing 54, N. Y.*

WEATHERSTRIPPING

• An illustrated folder presents charts comparing *Dura-Seal* with various standards for weatherstrip specifications. *Zegers, Inc.*, 8090 S. Chicago Ave., Chicago, Ill.*

CONCRETE

• *Calcium Chloride in Concrete*, Manual CM-1, contains data on initial and final set, early strength, ultimate strength, curing and workability illustrated by charts. *Calcium Chloride Institute*, 909 Ring Bldg., Washington 6, D. C.

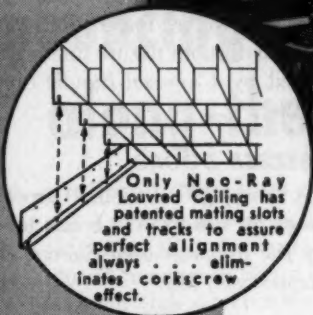
SPRAY COOLING TOWERS

• *Bulletin 312* describes the complete line of standard atmospheric spray cooling towers and includes new and simplified selection tables for determining correct tower sizes. *Binks Mfg. Co.*, 3122 Carroll Ave., Chicago 12, Ill.



a "beauty" for AMERICAN BEAUTY

NEO-RAY ML LOUVRED CEILING



Installation at American Beauty Cover Co., Dallas, Texas
80 foot candles of light.

Architect: Royall M. Strobe, Dallas, Texas

Engineer: J. A. Reeves

Elect. Cont.: Saucier Elect. Co., Dallas, Texas

The right combination for beauty and efficiency. That's NEO-RAY ML LOUVRED CEILINGS. You'll like the patented and exclusive features: mating slots and tracks that assure perfect alignment . . . stock sections that can be cut on the job to meet any requirements (see column in photo) . . . simple labor-saving design for low cost installation.

And there's no limit to the interesting lighting combinations you can create with ML LOUVRED CEILINGS . . . plus ML FASCIA PLATES for various designs with drop ceilings . . . and LAY-IN and HINGED LOUVRES for curtains, walls, skylights, wall cases, displays and special effects.

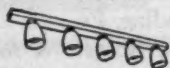
Send for NEW LOUVRED CEILING catalog No. 544

See our catalog in Sweet's Architectural File sec. 30a
NE

MANUFACTURERS OF LIGHTING FIXTURES INCLUDING:



Louvred Ceilings



Roto-Strip



Luminette



Klean-VU KVT Troffers

NEO-RAY PRODUCTS, Inc.
315 East 22nd St. • New York 10, N. Y.

(Continued from page 232)

PAINT SELECTORS

• A 4-page paint and linoleum color selection guide, designed with emphasis on unit ventilators, auxiliary cabinets and convectors for schoolrooms, includes suggestions for color combinations and the reflectance factor for each color. *American Air Filter Co., Inc., Unit Ventilator Products Dept., 215 Central Ave., Louisville 8, Ky.**

• *Match-A-Chip Color Chart* presents 72 chips, painted with latex-alkyd finish, to simplify the problem of selection and planning of color schemes. *Luminall Paints Division, Chicago 9, Ill.*

ALUMINUM

• A 24-page booklet includes up-to-date information on aluminum alloys, forms, properties, applications and availability and is illustrated with condensed tables and charts. *Kaiser Aluminum & Chemical Sales, Inc., Industrial Service Div., 1924 Broadway, Oakland 12, Calif.*



Student Physiology Laboratory, Wayne Medical School, Detroit, Mich.

Just what the Architect ordered

Planning and installing an efficient, practical, economical laboratory—whether for medical school, hospital, atomic energy or industrial project—calls for specialists. That's why so many leading architects call for Kewaunee.

They recognize the value of Kewaunee's half century of experience in designing, engineering and building fine laboratory equipment. Equipment planned for the maximum efficiency, convenience and productivity of technicians. Equipment permitting greatest flexibility of arrangement, both for present needs and future expansion. Equipment that measures up in every detail to the most exacting laboratory requirements.

To help you plan the most practical, efficient and economical laboratory, Kewaunee offers you—without cost or obligation—the services of a complete planning and engineering staff. Feel free to take advantage of this invaluable Kewaunee service. It is yours for the asking.



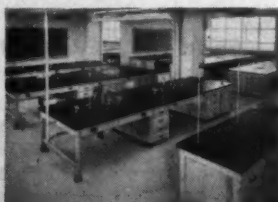
Kewaunee Mfg. Co.

J. A. Campbell, President

5046 S. Center St. • Adrian, Michigan
Representatives in Principal Cities



• Sterilizing Room
• Graduate Student Laboratory



• Student Pathology Laboratory
• Student Bacteriology Laboratory

GLASS BLOCKS

• *Beautiful Homes* illustrates how glass blocks can be used to enhance the appearance and value of the average home. 16 pp, illus. *Kimble Glass Co., Toledo 1, Ohio.**

GARAGES AND CARPORTS

• *Garages and Carports* (4 pp, illus.), and what varied uses they have, is Circular C5.9 in a series published by the *Small Homes Council, University of Illinois, Urbana, Ill.*

AWNINGS

• Duralure awnings made of fiberglass are described in an illustrated folder available from *U. S. Equipment Inc., Willow Grove, Pa.*

CONVECTION HEATING

• A 24-page design manual offers a technical outline, including detail drawings, of a low-cost panel convection heating system. *Flexicore Co., Inc., 1932 E. Monument Ave., Dayton 1, Ohio.**

HOLLOW METAL DOORS

• A 19-page illustrated catalog offers complete information on the seven styles of Fenestra Hollow Metal Doors. *Detroit Steel Products Co., 3113 Griffin St., Detroit 11, Mich.**

BATHROOM FIXTURES

• A four-color folder illustrating its basic bathroom fixture line has been released by *Universal-Rundle Corp., New Castle, Pa.*

FREEZER DOORS

• A catalog describing super freezer doors for use to -50 F has been issued by the *Jamison Cold Storage Door Co., Hagerstown, Md.**

LITERATURE REQUESTED

R. Blickensderfer, Engineer, Armco Drainage & Metal Products, Inc., Middletown, Ohio.

Martin M. Cooper, Engineer, Cooper & Assoc., 105 W. 40th St., New York 18, N. Y.

T. E. Eden, Architect, P. O. Box 874, Adams Hotel, Lower Level, Phoenix, Ariz.

Paul Deering, 3821 N. Francisco Ave., Chicago 18, Ill.

Frank J. Mazil, Designer, Dole Rd., Myrtle Creek, Ore.

Donald Clark Scutt, Student, R.D. #1, Reading, Pa.

Stiles, Roberts & Assoc., Architects and Engineers, 1907 Broadway, Lubbock, Texas.



New Thermo Vector painted to simulate wood paneling in office of Mathias Klein, Sr., Mathias Klein & Sons, Chicago, Illinois.

Announcing... New Dunham **Thermo Vector** along-the-wall radiation

—with a tailored, trim look

New Dunham Thermo Vector looks good ANYWHERE! Its smooth, unbroken horizontal lines blend beautifully in any office or commercial building... and Thermo Vector is sturdy enough to stand up for years and still look good in any industrial or institutional installation.

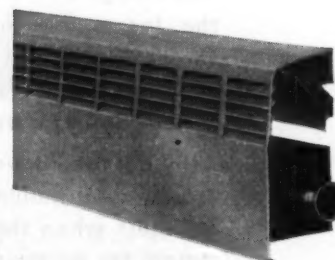
—with "built-in" versatility

New Dunham Thermo Vector is used flush mounted along the walls... one, two or three tiers high... with steam or hot water... steel or nonferrous elements. Use with full back or

use "hanging strip." Front outlet grille eliminates wall smudging—lets you install Thermo Vector ANYWHERE.

—with cost-cutting ease of installation

To install Dunham Thermo Vector, all you do is position the back or "hanging strip" on wall. Attach element support to it and hang elements. Mount one-piece cabinet... then accessories which conceal elements and piping for the "finishing touches." Fronts, backs and lever-operated damper easily cut on the job.



*New Dunham Thermo Vector.
Available 1, 2 or 3 tiers high.*

For full information, clip and mail the coupon.

DUNHAM

THERMO VECTOR

TRADEMARK

RADIATION • CONTROLS • UNIT HEATERS • PUMPS • SPECIALTIES

QUALITY FIRST FOR FIFTY-ONE YEARS

C. A. DUNHAM COMPANY • CHICAGO • TORONTO • LONDON

C. A. DUNHAM COMPANY
Dept. AR-1, 400 W. Madison Street
Chicago 6, Illinois

Please send Thermo Vector literature.

Name

Firm

Address

City Zone State

HOW TO SELECT

FOR ANY REQUIREMENT...

A simple definition of a floor drain is "a device set in the floor for carrying off waste water". Yet the selection of even a simple floor drain can be a difficult problem because of the particular conditions or requirements that are present. For example — will the waste water contain quantities of sediment, chemicals or oils? Will traffic over the drain be heavy or light? Is there a danger of backflow?

All these conditions and many more influence the type of drain to be selected for the particular location. One method that is helpful in determining the proper type of floor drain is to use a check-list of drain features such as is shown at the right. This list shows the great variety of features available in Josam drains and illustrates those features in the drains on the next page.

A far easier, quicker and more accurate method of selecting the drains is to call your Josam representative. Out of his years of specialized experience, out of his personal knowledge of the hundreds of floor drains in the Josam line, he can quickly recommend the drain that will have exactly the right features for your needs, because Josam makes a floor drain for every need.

Why not take advantage of this service when it costs you nothing . . . why take less than the best when the best costs no more? Call Josam for all your plumbing drainage needs — and you'll get your job done right!

- | | |
|---|--|
| <input type="checkbox"/> ADJUSTABLE STRAINER or TOP | See No. 1, 2, 3, 9 |
| <input type="checkbox"/> INTEGRAL TRAP | See No. 1, 5, 6, 11 |
| <input type="checkbox"/> BACKWATER VALVE | See No. 3, 5, 6 |
| <input type="checkbox"/> FLASHING CLAMP DEVICE | Can be furnished on Numbers
1, 2, 3, 4, 5, 8, 9, 10, 11 |
| <input type="checkbox"/> TRACTOR GRATE | See No. 4, 9 |
| <input type="checkbox"/> SEDIMENT BUCKET | See No. 2, 7, 8, 10, 11 |
| <input type="checkbox"/> CLEANOUT | See No. 5, 11 |
| <input type="checkbox"/> NON-CLOG TRIPLE DRAINAGE | See No. 2, 8 |
| <input type="checkbox"/> OUTLETS | See No. 14 |
| <input type="checkbox"/> MATERIALS AND FINISHES | See No. 13 |
| <input type="checkbox"/> SPECIAL REQUIREMENT | See No. 11, 12 |



JOSAM MANUFACTURING COMPANY

General Offices and Manufacturing Division • MICHIGAN CITY, IND.
REPRESENTATIVES IN PRINCIPAL CITIES

West Coast Distributor:
JOSAM PACIFIC CO.
San Francisco, Cal.

Canadian Manufacturers
JOSAM CANADA LIMITED
Toronto, Canada

FLOOR DRAINS

IN ANY TYPE OF BUILDING...



1 Josam Series No. 200 Floor Drain with integral drum-type "P" trap and adjustable strainer.



2 Josam Series No. 300-35C Floor Drain with polished brass non-clog adjustable strainer.



3 Josam Series No. 380-J Floor Drain with adjustable strainer and Back-water Control.



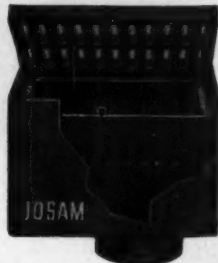
4 Josam Series No. 610 Floor Drain with deep set tractor grate for locations subject to heavy trucking.



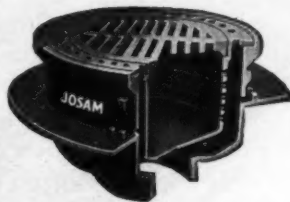
5 Josam Series No. 860-V Floor Drain with brass back water valve caulked into trap and floor cleanout.



6 Josam Series No. 810-V combined Floor Drain and trap with ball type back-water valve and internal brass cleanout.



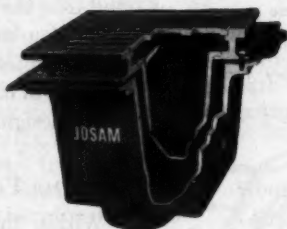
7 Josam Series No. 5040 Floor Drain with rectangular hinged grate, removable slotted sediment bucket.



8 Josam Series No. 5440 Non-Clog Triple Drainage Floor Drain, removable perforated sediment bucket with auxiliary drainage rim.



9 Josam Series No. 3610 Levelize Floor Drain with adjustable collar to permit raising or lowering grate to meet finished floor level.



10 Josam Series No. 5250 Floor Drain with bolted top section, removable sediment bucket and heavy duty grate.



11 Josam Series No. 6800 Floor Drain with funnel shaped seal, sediment bucket and floor clean-out, for intercepting oils, gasoline and other volatile liquids.



12 Josam Series No. 0370 Drain for draining excess water and slush at entrance of revolving doors.

13 MATERIALS AND FINISHES. Drain bodies are regularly furnished in cast iron lacquer finish unless otherwise described but can be furnished galvanized or malleable iron, brass or everdur with polished brass, chromeplate, everdur or white metal top.

14 OUTLETS. Drains shown above with bottom outlets can also be furnished with side outlet. Bottom outlets available female threaded or inside caulk. Side outlets furnished threaded, hub or spigot.

For each of the many basic drain designs in the Josam line, there are scores of variations depending on the particular requirement. These are all clearly illustrated and described in the Josam Catalog "K" or Manual "SK" — the accepted authorities in the field. These are invaluable reference guides on all plumbing drainage problems. Send coupon if you do not have a copy of Josam Catalog "K" or Manual "SK".

JOSAM MANUFACTURING COMPANY
Dept. AR • Michigan City, Indiana

Please send free copy of Catalog "K" ☐
Manual "SK" ☐

Name Profession

Firm

Address

City Zone State

COLLEGE HOUSING

(Continued from page 154)

proved for the construction of housing for 34,214 students, 260 married students and 467 faculty members. Funds have been reserved for an additional 61 projects, involving \$40.2 million, so that additional accommodations are now in sight for 9708 students, 366 married students, and 111 faculty members. A total of \$153 million has been com-

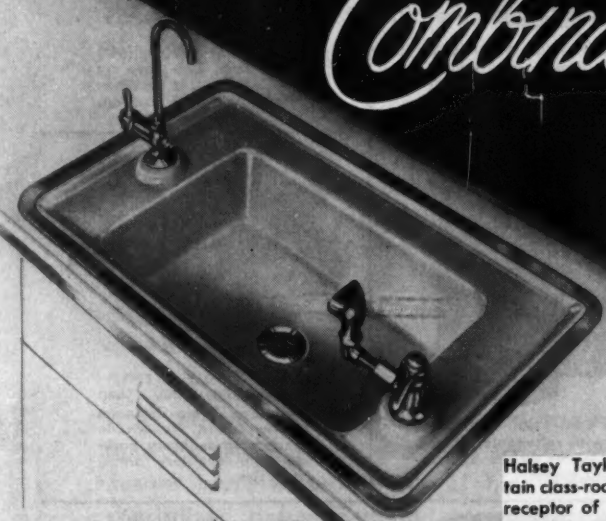


Men's dormitory for Baylor University (Texas) accommodates 340, cost \$700,000. Area per occupant, 176 sq ft; study-bedroom, 107 sq ft; toilet-shower, 10 sq ft. Architects: Easterwood & Easterwood

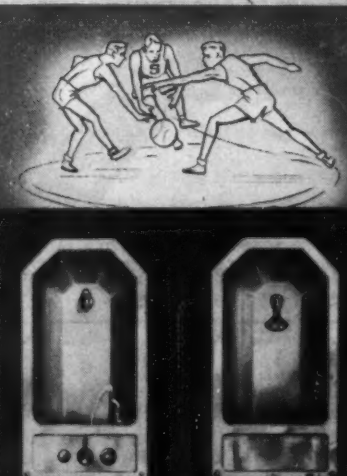
2

POPULAR SCHOOL

Combinations



Halsey Taylor Counter-Type Fountain class-room unit, 20" x 30", with receptor of acid-resisting, gleaming porcelain cast iron or lifetime stainless steel. Chromium Plate Glass Filler and Fountain Head. All the usual Halsey Taylor sanitary features. Specify No. 4840.



This is an ideal combination for "gym" or athletic areas. The Halsey Taylor recessed Cuspidor, No. 4647, shown at right, is designed to be used with No. 4646 recessed wall type, shown at left. Special outlet supplies water to flushing jet of cuspidor. Semi-recessed models also available.

School boards and architects know that to specify Halsey Taylor drinking-water equipment is to provide the utmost in sanitation as well as trouble-free maintenance. Every Halsey Taylor product—whether fountain or cooler—is factory-tested for dependability in service . . . backed by years of specialization in manufacturing this type of equipment exclusively.

The Halsey W. Taylor Co., Warren, O.



mitted from the \$200 million thus far released from the authorization.

So much for the history and statistics of the program.

Diversity and Freedom

The provision of housing for students and faculty on the campus of a university presents unique and challenging problems to the university officials and their architects. Here, as in many other areas of American life, where its diversity is part of its brightest promise, it is difficult to generalize or to attempt to impose rigid, pre-conceived designs. Congress itself recognized this fact and required only that the Administrator find that the housing will be undertaken in such a manner that "economy will be promoted in its construction and that it will not be of elaborate or extravagant design."

Designs Vary Widely

Within this finding it has been possible for many different types of institutions and their architects to seek and to find widely varying solutions to meet the highly specialized housing needs of their campuses and their students. There appears to be no single or simple answer; on the contrary, the approaches which the colleges and universities have taken under the College Housing Program have all the variety which has characterized American higher education from its inception. The experience derived from these different approaches is available to colleges and universities and their architects in the Regional and Central Offices of the Housing and Home Finance Agency.

(Continued on page 240)

The right windows can make a REAL DIFFERENCE . . .



Ask the teacher!

The teacher sees the effect of good daylighting and good ventilation in a lot of ways. In a classroom filled with fresh air and daylight, her students are more alive and alert—more receptive to learning. There's none of that "closed-in" feeling. And needless to say, the teacher herself feels "more like teaching" in such a room. Fenestra* windows give you *more* daylight per opening because of their slender, but strong steel members.

There are practical, as well as psychological, advantages to the right windows. The teacher can operate the vents in Fenestra Intermediate Projected Steel Windows easily. Tilt-in vents protect her students from drafts, and like tilt-out vents, admit fresh air even on rainy days. And sill vents keep even the most rambunctious of small fry from tumbling out the windows.

They'll probably stay cleaner, too, because they can be washed (as well as screened) from the inside—with resultant savings in time, labor and cost. *And they'll never need painting if you specify Fenestra Super Hot-Dip Galvanizing.* It's a special process that protects your windows from rust and weather for life!

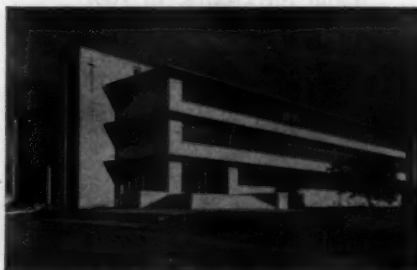
For complete information on these beautifully designed steel windows, call your Fenestra representative. He's listed in the yellow pages of your phone book. Ask for our authoritative booklet, called *Better Classroom Daylighting*. Or write Detroit Steel Products Company, Dept. AR-1, 2252 East Grand Boulevard, Detroit 11, Michigan. **

Fenestra | INTERMEDIATE STEEL WINDOWS

Architectural, Residential and Industrial Windows • Metal Building Panels
Electrifloor* • Roof Deck • Hollow Metal Swing and Slide Doors



MISSOURI. Fenestra Steel Windows in Willard Elementary School, Willard, Mo. Architect: I. Dale Allmon, Springfield, Mo. Contractor: DeWitt Construction Co., Springfield, Missouri.



TEXAS. Fenestra Steel Windows in the Science Hall at St. Mary's University, San Antonio, Texas. Architect: Julian & White, San Antonio. Contractor: Lynn & Morsey, San Antonio, Texas.



MASSACHUSETTS. Fenestra Steel Windows in the Elementary School at Kingston, Mass. Architect: Bogner & Richmond, Cambridge, Mass. Contractor: Blake Construction Co., Milton, Mass.

COLLEGE HOUSING

(Continued from page 238)

The Financial Equation

The housing problem at a college or university, in common with all housing problems, has at its base a financial equation. Charges for tuition and board and room have increased substantially since the war, but these charges can hardly be expected to keep pace with the increase in construction costs which



Men's dormitory, U. of Maryland — seven connected four-floor units; capacity 368 (on cost and areas, see Maryland women's dormitory, page 152). Architects: Walton and Madden



Now MY BOSS IS PROUD OF THE LETTERS I WRITE!

Since the Boss gave me an Underwood All Electric Typewriter, not only original letters, but carbon copies are sharp and clear. Just imagine you can make as many as you need with a light touch of your finger

... Because electricity does the fatiguing work.

See and try the sensational All Electric at your local Underwood Office.



Underwood Corporation

One Park Avenue, New York 16, N.Y.
Underwood Limited, Toronto 1, Canada
Sales and Service Everywhere



TYPEWRITER LEADER OF THE WORLD

Sales and Service Everywhere

have doubled since 1941 and quadrupled since 1913. Even with the 40-year maximum amortization and the current three and a quarter per cent interest rate provided under the College Housing Program, it is almost impossible to work out projects which are completely self-liquidating from the moderate rentals which are economically feasible for college students today. Nearly every college housing loan requires additional revenues from other debt-free buildings, student fees or other sources. Thus, each institution must work out its own individual solution to a financial problem whose principal components are the construction cost per bed and monthly rent per student. It is not an easy equation to solve, for there is no magic about the College Housing Program. However, notwithstanding its lack of magic, the program has brought what seemed to be hopelessly impossible situations into the realm of the possible for some 226 institutions which are planning or constructing housing for 48,377 students.

Private Financing Spurred

While the College Housing Program is intended to operate on a self-liquidating basis without eventual cost to the Government, direct Federal loans do represent an immediate outgo of Federal funds from the overburdened Federal budget. Also, it is clear that if the colleges and universities are to be able to handle the mounting tide of enrollments, it will have to be done through sources other than the limited Federal program, which should be reserved for the more critical needs. The U. S. Office of Education estimates that the two million-odd students now in college will

(Continued on page 242)

Here's a steel panel roof with an acoustical treatment built right in . . .

WHAT COULD MAKE MORE SENSE?



If you're looking for a really practical acoustical treatment for your new classrooms, gym or auditorium, look no further! For these Fenestra* Acoustical-Structural Building Panels form a beautifully finished structural ceiling, noncombustible acoustical treatment and a joist-system support for finished roofing—all in one!

No acoustical material has to be pasted on the ceiling surface. You pay no bills for special trades or extra labor. Maintenance washing or painting won't affect the acoustical efficiency. Bumps or knocks can't hurt this ceiling. And if your building has a second floor, your Fenestra ceiling forms a strong solid subfloor for rooms above.

This combination acoustical-structural ceiling goes up *fast*. The panels lock together simply and quickly, saving days of labor, giving you substantial cost savings. To see how much sense it makes in the building *you're* planning call your Fenestra Representative. And do it *before* your plans are on paper! Or write to Detroit Steel Products Company, Dept. AR-1, 2252 E. Grand Blvd., Detroit 11, Mich.

*Trademark

Fenestra

**METAL
BUILDING
PANELS**

Architectural, Residential and Industrial Windows • Metal Building Panels
Electrifloor† • Hollow Metal Swing and Slide Doors • Roof Deck

†®



PANELS are laid over the rigid steel frame during course of erection. It's a construction method that really pays off. Be sure to investigate before you plan your next building!



ACOUSTICAL PANELS in Willard Elementary School, Willard, Mo. Architect: I. Dale Allmon, Springfield, Mo. Contractor: DeWitt Construction Co., Springfield.



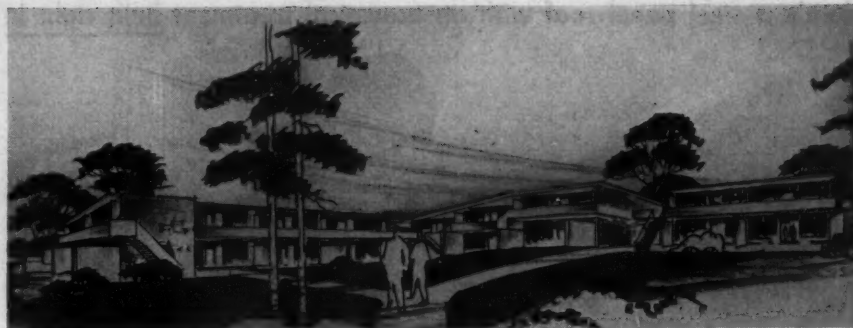
ANOTHER INSTALLATION at Converse County High School, Douglas, Wy. Architect: Hitchcock & Hitchcock, Laramie, Wy. Contractor: Spiegelberg Lumber & Building Co., Douglas.

COLLEGE HOUSING

(Continued from page 240)

increase by more than 50 per cent, or to more than three million by 1960.

With these two considerations in mind, the Housing and Home Finance Agency has embarked on an aggressive program to stimulate a market for College Housing Program bonds. We have been referring to private investment as many as possible of these loans at all stages of the application process and



Married students' apartments, Indiana University — there are two units like this one with 46 one-story apartments each (see page 153 for Indiana duplex). Architect: Edward D. James

Michaels Quality Products

FOR YOUR BUILDING PROJECTS



Michaels produces aluminum, stainless steel and bronze products for the building industry. The bronze railing used in the Huber Mausoleum, New Orleans, is a typical example. And there are literally scores of other products for interior and exterior use.

Whatever you need, if it's made of stainless steel, aluminum or bronze, and irrespective of the size of the project, it will pay you to contact Michaels . . . a name well known among architects and builders for products of the highest quality. Michaels has the men and equipment to faithfully reproduce in metal the most intricate details of your designs.

Send us the specs. for your next job. We are confident you will find our prices right. And we'll be glad to refer you to any number of architects and contractors who have found Michaels a thoroughly reliable source of supply.

The Michaels Art Bronze Co., Inc.

234 Scott Street, Covington, Ky.

Manufacturers since 1870 of many products in Aluminum, Bronze and other metals



MICHAELS PRODUCTS

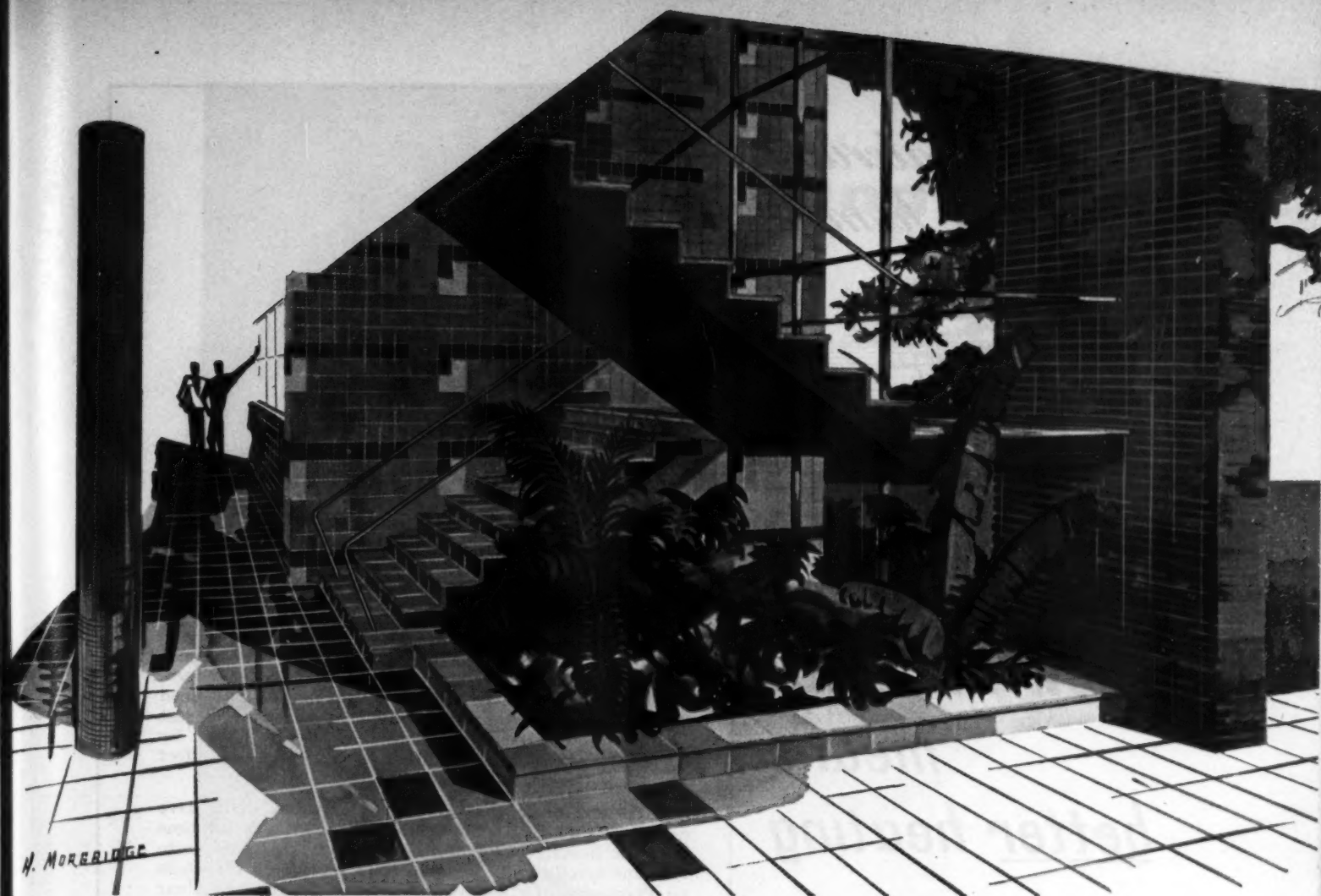
- Bank Screens and Partitions
- Bronze Doors
- Aluminum Doors
- Elevator Doors
- Store Fronts
- Name Plates
- Grilles and Wickets
- Kick and Push Plates
- Push Bars
- Cast Thresholds
- Lettering
- Check Desks (standing and wall)
- Lamp Standards
- Marquees
- Tablets and Signs
- Extruded Thresholds
- MI-CO Parking Meters
- Museum Trophy Cases
- Inurnment Urns
- Stair Railings

Literature on any or all Michaels products will be sent on request.

even after the projects are completed. Under this policy which I inaugurated shortly after becoming Administrator of the Agency, more than \$60 million in college housing loans have been rescinded or withdrawn in favor of private financing.

The application of this policy requires the borrowing institution to advertise its bonds for private sale and to accept private bids for all or part of the issue if the interest rate bid is not more than one fourth of one per cent higher than the college housing rate. During the last six months some 16 dormitory issues approved under the program have been purchased privately, in whole or in part, many of them at rates lower than the college housing rate. Three recent loans with maturities up to 40 years have been purchased by private investment groups — making the first time in the history of dormitory bond financing that bonds covering this span of years have found a market other than the Government. The College Housing Program is stimulating an awareness of the soundness of these loans and a market for this type of security seems to be in the process of creation. To the extent that this market develops, the need for direct Federal loans will diminish and a much broader program will come into existence which can tap private investment funds to provide many times the amount of housing possible under the College Housing Program.

I believe that the College Housing Program furnishes an opportunity for institutions of higher learning to analyze their needs, to crystallize their plans and to develop economically sound projects with assurance of reasonable financing.



Design for a school corridor and stair well by Marsh, Smith & Powell, Architects.

"Clay Tile Meets All Tests: Quality, Permanence & Design."

MARSH, SMITH & POWELL
per HP

West Coast architects Marsh, Smith & Powell found clay tile a good collaborator to work with in their design for a modern school corridor with stair well. This rendering shows how clay tile performs a permanent double service of function and design.

The important check points: low-upkeep tile floors to take generations of student traffic—glazed tile walls that keep maintenance down and good appearances up for decades—tile treads and risers which absorb footsteps unmarred for years, and ceramic mosaics on the corridor columns which offer a striking treatment that is maintenance-free.

When you approach your next school project, keep clay tile in mind. It's the ideal high traffic, low maintenance floor covering. It gives you and your clients a permanent solution for easily-cleaned, decorative walls that never need replacement. And it is flexible enough to give you unique, custom designs with standard units.

So be sure to check today's range of clay tile colors, shapes and types—the widest of any modern building material. When it is a clay tile installation, it never fades, burns, stains, scratches or needs refinishing or redecorating—all the cost is figured in at the start!

The Modern Style is

TILE COUNCIL OF AMERICA, Room 3401, 10 East 40th St., N.Y. 16, N.Y. or Room 433, 727 W. 7th St., Los Angeles, Calif.

PARTICIPATING COMPANIES: American Encaustic Tiling Co. • Architectural Tiling Co., Inc. • Atlantic Tile Mfg. Co. • B. Mifflin Hood Co. • Cambridge Tile Mfg. Co. • Carlyle Tile Co. • General Tile Co. • Gladding, McBean & Co. • Jordan Tile Mfg. Co. • Mosaic Tile Company • Murray Tile Co., Inc. • National Tile & Mfg. Co. • Olean Tile Co. • Pomona Tile Mfg. Co. • Robertson Mfg. Co. • Royal Tile Manufacturing Co. • Sparta Ceramic Co. • Summitville Tiles, Inc. • United States Quarry Tile Co. • Winburn Tile Mfg. Co.

GENUINE CLAY

tile

*New materials
mean better homes*



*...now
a new material
means
better heating*

Every year you design better and better homes—thanks in part to the wealth of new materials available to you. Now a new material gives you heating and air conditioning worthy of the finest homes you build—and gives it to you at prices to fit even lowest-budget homes.

That new material is Ceramic-Coated steel in Permaglas heating and air conditioning units. The miracles of production and research that brought about famous glass-lined Permaglas water heaters now give that resistance to rust and corrosion to heating and cooling units. Result: far longer life, *plus* quieter operation from the damping effect of the fused-on ceramic coating.

And remember that gas-fired Permaglas units have exclusive A. O. Smith Modulated Heat—the *only* full-time domestic heating in the world... the *only* real answer to full-time comfort. We'll be glad to send you full details on Permaglas, the newest in heating and cooling. Your clients and customers will know that a Permaglas-equipped home is a quality home.

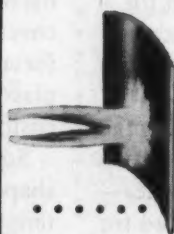
Permaglas®

HEATING AND AIR CONDITIONING

Through research  ...a better way

A.O. Smith
CORPORATION

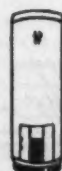
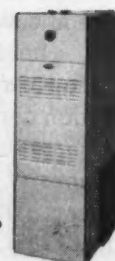
PERMAGLAS DIVISION
KANKAKEE, ILLINOIS



High
Temperature
Glass
Can't
Corrode



High
Temperature
Glass
Can't
Rust

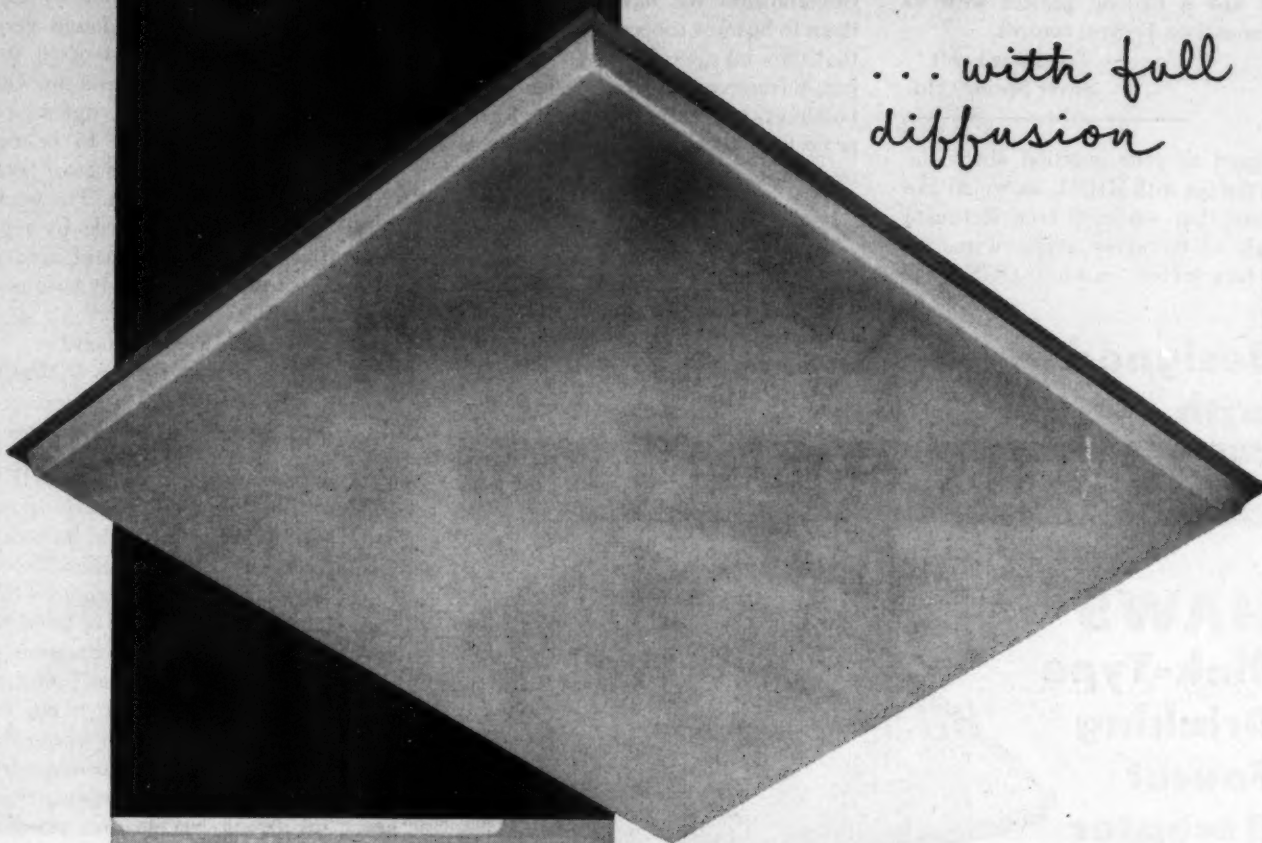


Other famous A. O. Smith-Permaglas products are the famous Permaglas glass-lined water heater, and amazingly efficient A. O. Smith-Burkay Commercial Water Heaters.



**broad
area lighting**

*... with full
diffusion*



optiplex

Graceful, trim lighting solution for store, office or any public area
... the new super-sized Optiplex fixture by Lightolier. Four
feet square, equipped with eight 40W. rapid start lamps, it
spreads soft, even light without harsh brightness contrasts.
Formed Plexiglas diffuser is clear white, hinged for easy cleaning
or relamping, permanently retains its whiteness, dimensions
and even light diffusion. Lights instantaneously without flicker.
Available for stem, surface, or recessed mounting.

*Optiplex fixtures are available in a wide range of sizes for
commercial and residential installations. For a portfolio of
Optiplex lighting by Lightolier, write today to Dept. AR-44.*

LIGHTOLIER



Architectural Fixtures, Residential Fixtures, Portable Lamps.
JERSEY CITY 5, NEW JERSEY



(Continued from page 24)

were made available promptly. I have never had a Federal project with so little conscious Federal control.

— Ted Engelhardt
Silver Spring, Md.

In regard to your question about the relationships with HHFA, we would like to state that we have been fortunate enough to do many projects, mostly secondary schools, in which HHFA was

the controlling agency for the Federal Government. We have always found them to be most cooperative and we feel that they take special care not to interject themselves into the design of the buildings but rather leave it to the project architect to solve a particular problem in his own fashion.

— Dennis W. Madden
Walton and Madden
Mt. Rainier, Md.

Your impression that the operation of the program has permitted freedom in developing solutions suited to local problems and conditions is correct. We have worked with the HHFA on the projects for both Knox College and Antioch College and have found very fine cooperation on the part of all the government officials. Reviews by the government are, of course, apt to be rather lengthy but this is to be expected, and we feel that we have been given maximum cooperation. The work in the field on Knox College by representatives of the government agency was conducted in an extremely business-like and satisfactory manner.

— James W. Hammond
Skidmore, Owings & Merrill
Chicago, Ill.

Your impression regarding the HHFA policy of allowing freedom of program and design to the sponsor and its architect has certainly been exemplified in our case. There has been no attempt on the part of the HHFA to dictate or interfere with the development of the program or the plans, although there was considerable question as to whether or not we would be able to obtain bids within the budget. The HHFA is to be commended for their attitude in this regard, since every institution has its own peculiar problems. The only criticism we would care to make is about the depth of the red tape involved before the planning work actually got under way and the legal red tape incidental to bidding.

— L. Robert Gardner
Cedar City, Utah

The operation of the program by the HHFA has been purely financial rather than with any architectural strings attached, other than size and facility requirements. We appreciate the fact that we were not governed by any design requirements; however, we were considerably delayed getting the project on the market due to the slow processing through the Chicago office. This office is not in agreement with the minimum wage rates which we were required to use by the HHFA, which is in accordance with minimum wage rates of the nearest labor union 80 miles away. These wages are much higher than the local market requires. The relationship between the architect and the HHFA has been handled mostly through the owners but they have been very pleasant.

— William A. Lockard
Decorah, Iowa

**designed
with**

SCHOOL CLASSROOM IN MIND!

HAWS Sink-Type Drinking Faucet Receptor

School classrooms may differ widely in their requirements. Realizing this, the new HAWS Sink-Type VANDAL PROOF Drinking Faucet Receptor was designed to accept practically any combination of HAWS Pantry Faucets—or Fill Glass Faucets—and HAWS bubbler-type Drinking Fountains.

● The HAWS Receptor is cast iron—beautifully finished in acid resisting white enamel. Stainless steel mounting rim prevents water running onto table or cabinet top and affords a water tight bond between sink and top surface.

Write today for brochure illustrating combinations of HAWS fixtures that may be utilized with Receptor. You'll find a combination to fit the school job you have on the board or are now planning!



HAWS DRINKING FAUCET CO.
1441 FOURTH STREET (Since 1909) BERKELEY 10, CALIFORNIA



Alcoa Building, Pittsburgh, Pa.

Harrison & Abramowitz, Architects

marble

**when beauty and
low maintenance cost must be combined**

The brilliance of new materials can be a monotonous thing, unless the softening influence of inimitable nature lends its hand. It can be a treacherous thing, unless means are taken to make it practical, easy to live with, economical to maintain.

Marble does all this. By itself it is beautiful; combined with other fine materials it is unexcelled. But it is always practical, always easy to maintain.

Furthermore, Marble is *economical*. In fact, the total cost of beautifying the Alcoa Building with Marble — in the main lobby, the elevator lobbies, Board Rooms, floors, etc. — was only 1.7% of the total construction cost. How else could you get so much for so little?

Literature available FREE
 "Proof that marble costs less"
 "Marble Forecast 1954-55"
 "Marble in the Bank"

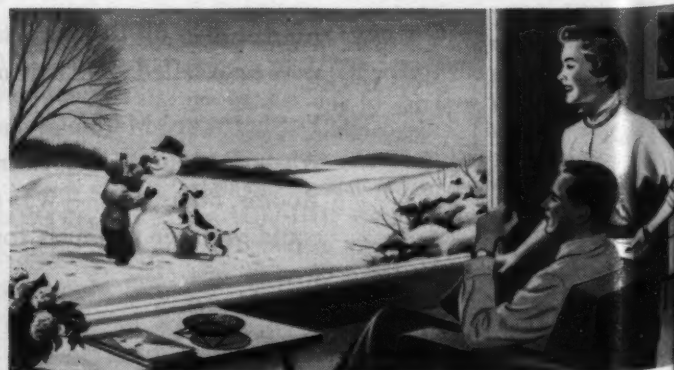
MARBLE  INSTITUTE OF AMERICA, INC.
 108 FORSTER AVENUE, MOUNT VERNON, NEW YORK



LOOK AT THIS COMPARISON between the reflections of the upside-down signs in the mirror of conventional plate glass (left) and the mirror of Parallel-O-Plate Glass (right). This unretouched photograph dramatically illustrates the principle of parallelism in glass.



LOOKING IN through the Parallel-O-Plate Glass in a storefront, you hardly know the glass is there.



LOOKING OUT of your picture window made of Parallel-O-Plate *Thermopane* you see the scene as it is.

Look at the amazing difference between new Libbey·Owens·Ford Parallel-O-Plate Glass and ordinary plate glass

Why does merchandise look better through a Parallel-O-Plate Glass storefront?

Why does your view look better through a Parallel-O-Plate Glass picture window?

Why do buildings look better with windows of Parallel-O-Plate?

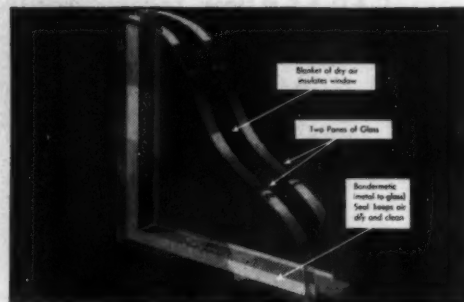
Because this amazing new plate glass is *twin-ground* — the first and only *twin-ground* plate glass made in America!

At first this L·O·F glass was reserved for fine mirrors and military optical instruments. But now it is available for general use—and it will change the face of America.

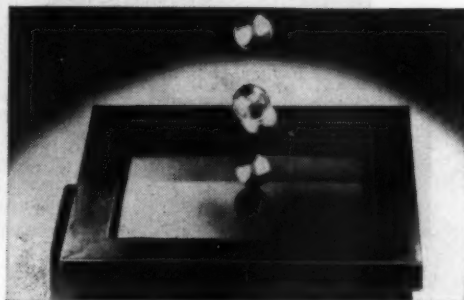
Distortion in glass sometimes results from poor installation but most frequently is due to a lack of parallelism of its two surfaces.

At L·O·F, plate glass is run through massive new machines which *grind both sides simultaneously* for maximum parallelism. And Libbey·Owens·Ford is the only manufacturer of *twin-ground* plate glass in the U.S.

Be sure you specify Parallel-O-Plate Glass. Get it from your local L·O·F Glass Distributor or Dealer who is listed under "Glass" in the yellow pages of phone books. For further information, write to Dept. 7515, Libbey·Owens·Ford Glass Company, 608 Madison Avenue, Toledo 3, Ohio.



Parallel-O-Plate is doubly important for *Thermopane*® insulating glass because there are two panes to look through.



$\frac{1}{4}$ " *Tuf-flex*® is tempered Parallel-O-Plate Glass. A $\frac{1}{2}$ -lb. steel ball, dropped 10 feet, bounces right off $\frac{1}{4}$ "-thick *Tuf-flex*. For vulnerable windows.

Parallel-O-Plate Glass

Finest plate glass made in America...only by **LIBBEY·OWENS·FORD**
a Great Name in Glass

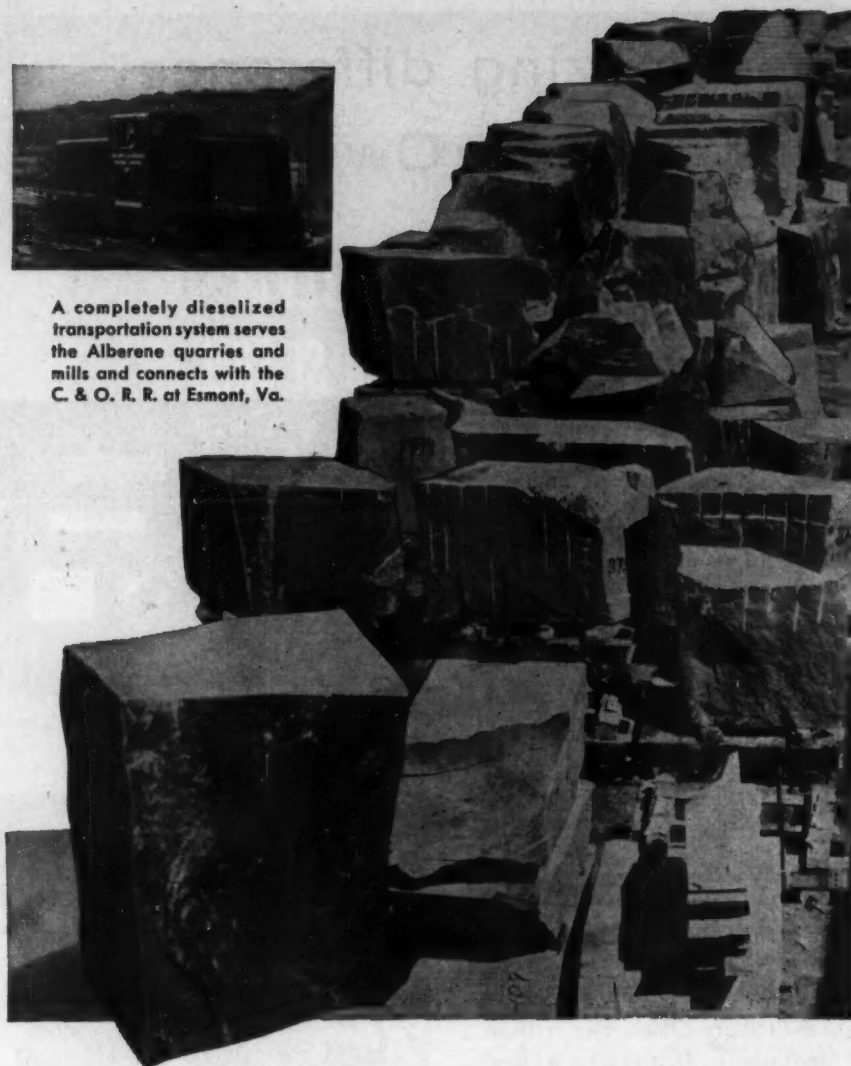


LOOKING AT windows of Parallel-O-Plate Glass you see how much its truer reflections mean to exterior appearance.





A completely dieselized transportation system serves the Alberene quarries and mills and connects with the C. & O. R. R. at Esmont, Va.



Let's talk "DELIVERIES!"

For practical purposes, the supply of Alberene Stone is inexhaustible. It is quarried, milled, and transported by the most modern and efficient methods.

With reasonable cooperation from the purchaser, we can schedule our production of stone to meet the requirements of contractors and laboratory equipment manufacturers.

There's no need to let deliveries interfere with getting Alberene Stone — *the natural silicate stone with the surface that goes all the way thru!* Only Alberene Stone can be cut, drilled, tongued and grooved, refinished and reused almost indefinitely.

For information and technical assistance, address: Alberene Stone Corporation, 419 Fourth Avenue, New York 16, N. Y.

ALBERENE STONE

provides LOW ABSORBENCY protection

THE RECORD REPORTS

WASHINGTON

(Continued from page 38)

PBS handbooks serve as guides in preparing and carrying out Federal building plans. They carry basic design criteria setting out space requirements, mandatory architectural and engineering standards, and optional design data for construction elements such as floor plans, materials, finishes, and lighting fixtures. Optional data, most often in the form of sample drawings, are intended by PBS to permit flexibility to fit plans to size, location, supplies, and various combinations of agencies for which buildings are constructed. The agency also carries stock specifications of highly repetitive items such as hardware for doors and windows.

PBS supervises Federal building construction of all types: court houses, office buildings, hospitals, warehouses, border stations, and multipurpose buildings for postal, judicial, and office use.

ISSUE DESIGN DATA FOR NEW HILL-BURTON TYPES

New design standards for hospital types added to the Hill-Burton hospital construction program by 1954 amendments to the basic legislation have been issued by the U. S. Public Health Service of the Department of Health, Education and Welfare. Copies of the standards are available at the state agencies or from USPHS, Washington 25, D. C.

Diagnostic centers, chronic disease hospitals, rehabilitation facilities and nursing homes are the types covered by the new standards, which have been approved by the technical committee for architectural standards of the Federal Hospital Council, the full Council and the Surgeon-General.

The states are beginning to become active in developing their own state plans, which must be approved by the Surgeon-General before they can receive grants under the expanded program. USPHS reports that many states have already begun their inventories and the Federal agency expects to begin taking formal applications on the new types before the middle of next year.

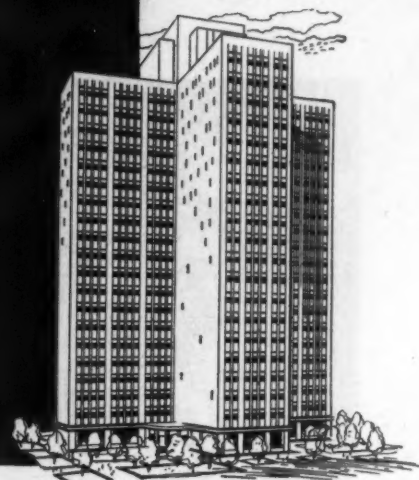
In the 1954 legislation, Congress authorized expenditure each fiscal year for the remaining three years of the Hill-Burton Act of \$20 million for diagnostic

(Continued on page 254)



One Gateway Center

Modern Office Building in Pittsburgh, Pa. Architects: Rodgers Associates, New York, N. Y.; Irwin Clavan, New York, N. Y.; Eggers and Higgins, New York, N. Y.



Washrooms of another notable building

finished in Carrara Glass

• Through their consistent specification of Carrara Structural Glass, leading American architects have proved it to be a preferred material for walls, stiles and partitions in the washrooms of important buildings. And the reasons behind this preference are many.

Carrara Structural Glass is outstanding for quality. Every piece is mechanically ground and polished. It permits joints that are true and even, without lippage or warpage.

The beautiful, gleaming finish of Carrara Glass is permanent. It won't check, craze, stain or fade. Its smooth, homogeneous surface is unaffected by moisture, soap, damp atmospheres and pencil marks. It won't absorb odors.

Carrara Glass is sanitary . . . and easy to keep clean. It is installed in large sections with fewer joints and crevices to catch dirt and dust.

And Carrara is versatile. Available in ten glowing colors, Carrara Structural Glass lends itself perfectly to an unlimited variety of architectural applications.

For more information on this distinctive material, write Pittsburgh Plate Glass Company, Dept. 5100, 632 Fort Duquesne Blvd., Pittsburgh 22, Pa.

Carrara

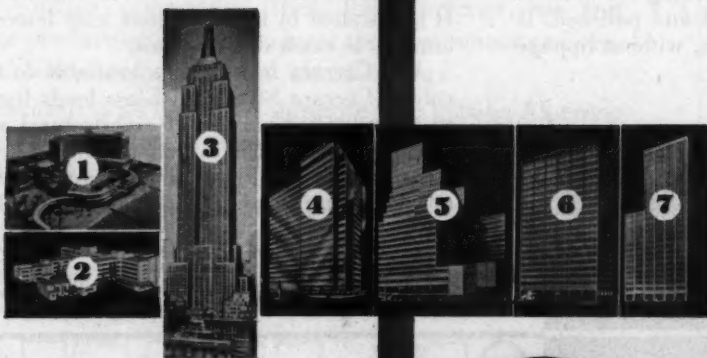
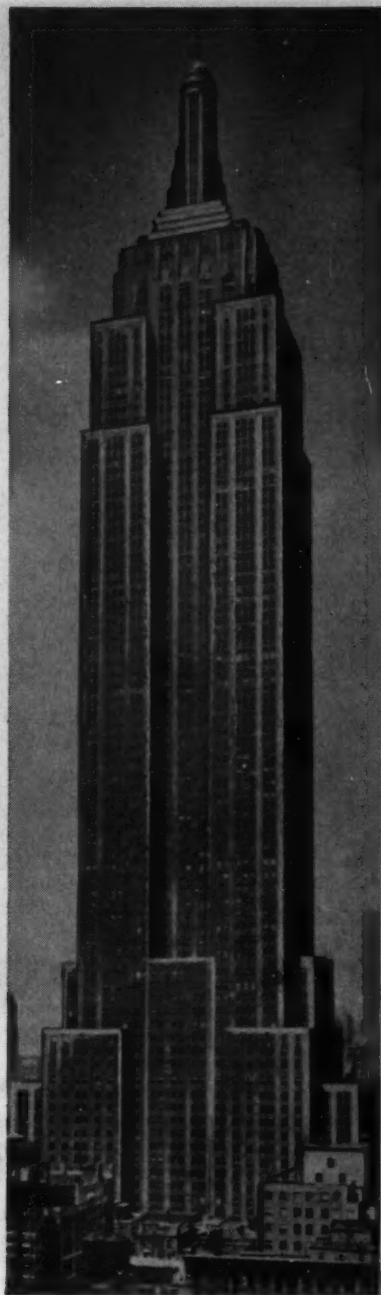
...the quality structural glass



PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED



York brought the right kind of air conditioning to Cincinnati's luxurious Netherland-Plaza Hotel, to New York's beautiful Esso Building and to scores of others in addition to the seven famed buildings shown. (1) Miami Beach's magnificent new Fontainebleau Hotel and 26 of Miami Beach's other largest, newest hotels, (2) California's St. Francis Hospital, (3) New York's Empire State Building, (4) Atlanta's new Fulton National Bank, (5) Webb & Knapp's beautiful new 34th Street Building in New York, (6) Denver's new Mile High Center, (7) San Francisco's new Equitable Life Assurance Society Building.

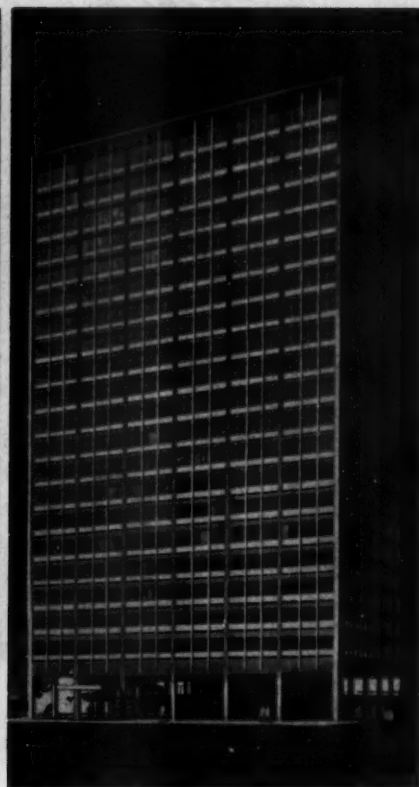


the quality name in

YORK CORPORATION

HEADQUARTERS FOR

Why have so many of America's largest, most famed buildings installed Yorkaire Systems of air conditioning?



FROM PHILADELPHIA'S FABULOUS NEW PENN CENTER

to office buildings, hotels and hospitals in your own city, think for a moment how many of America's largest, most famed buildings have installed—or are installing—Yorkaire Systems of Air Conditioning!

And there is every good reason: a Yorkaire System is the *right kind* of air conditioning . . . precision-tailored to the building.

Since glass areas and heat loads and floor areas and numbers of rooms, economic considerations and taxes and depreciation and a score of other

factors vary from building to building, up and down the land, obviously no one system—or even two or three—can do the job best for every building. That's why York chooses and tailors each system to fit the particular building in which it is installed. And *that's* why so many of the "tough jobs" come to York.

Apply this knowledge and experience to your own building (old or new). Call your York District Office (located in principal cities and listed in the classified telephone directory). Or write to York Corporation, York, Pennsylvania.

Visit the York Booth (219-227) at the 12th International Heating and Ventilating Exposition

air conditioning and refrigeration

M E C H A N I C A L C O O L I N G S I N C E 1 8 8 5

The ARCHITECT knows that ALGRIP

—the *only* abrasive rolled steel floor plate in the world—means permanent safety against slipping accidents in any industrial plant . . . even on wet, greasy or oil-splashed floors or ramps.

He also knows . . .

—that ALGRIP's depth-controlled abrasive penetration of its rolled steel base . . . assuring a safety surface self-renewed against the hardest wear . . . means greater . . . constant . . . and lasting . . . safety of your workers' lives.

—that ALGRIP is approved for safety by the Underwriters' Laboratories.

A.W. ALGRIP Abrasive Rolled Steel Floor Plate puts your business on a firm footing.



A.W. ALGRIP

ALAN WOOD STEEL COMPANY
Conschocken, Pa.

Please send A.W. ALGRIP Booklet AL-2

Name

Title

Company

Address

City Zone State

Other products: A.W. SUPER-DIAMOND Rolled Steel Floor Plate—Plates—Sheets—Strip—(Alloy and Special Grades)



THE RECORD REPORTS

WASHINGTON

(Continued from page 250)

centers, \$20 million for chronic disease hospitals and \$10 million each for rehabilitation facilities and nursing homes. Appropriations for this first fiscal year of the new program, however, were held at much lower levels — \$6.5 million each for diagnostic and chronic disease facilities and \$4 million each for rehabilitation facilities and nursing homes. An additional appropriation of \$2 million was made to assist states in the survey and planning phases.

Only the nursing homes constitute a completely new category under the Hill-Burton law — but rehabilitation, chronic disease and diagnostic or treatment facilities have heretofore been eligible for aid only as constituent parts of other hospitals and not as independent facilities.

Douglas Orr of New Haven, a past president of the American Institute of Architects, is chairman of the Federal Hospital Council's technical committee for architectural standards. Other architects on the ten-member committee are Wilbur H. Tusler of Minneapolis, chairman of the A.I.A. Committee on Hospitals and Public Health; and Clifford Wolfe, A.I.A. secretary of the American Hospital Association's Council on Hospital Planning and Plant Operation.

MAKE FIRST MOVE ON NEW MILITARY HOUSING UNITS

The Department of Defense has made what it calls a "line item certification" for approximately 40 per cent of the \$75 million Congress appropriated for the construction of military housing during fiscal 1955. This is the initial step toward provision of armed services housing under the direct appropriation method.

After need has been certified by the Secretary of Defense, the services must meet design and specification criteria outlined in the legislation. An additional 10 per cent of the appropriated funds is soon to be given line item certification, bringing to 50 per cent the amount of the fund placed in that category.

The 40 per cent certification covers about 2000 of the 11,000 units authorized by the 83rd Congress. This is described by Pentagon personnel as "drop-in-the-bucket" operations. Congress

(Continued on page 258)



1907...

a famous date in construction



...the first white portland cement **MEDUSA WHITE** was used!

On this historic date the first commercial white portland cement was given to the building field. After years of intensive research Dr. S. B. Newberry had accomplished his life-long quest for a portland cement that was white, and far more beautiful than any other cementitious material. And equally important, his method of making Medusa White cement was so inexpensive that architects and contractors were able to adapt it to a multitude of uses. Within a short time Medusa White became the accepted way for making finer stucco, cast stone, mortar and white concrete. Within a few years it was standard practice for better sculpture, cast slabs and terrazzo.

The pure "diamond blue" whiteness of Dr. Newberry's cement is something that just couldn't be improved. No other cement in the half century since its perfection has ever equaled the white color of Medusa White. It's no wonder that only recently it was selected carefully from all other cements for such outstanding construction as the United Nations Permanent Headquarters and the restoration of Independence Hall.

If you are planning construction of a better type, specify famed "non-staining" Medusa White, the original white portland cement for stucco, pre-cast slabs and terrazzo.



MEDUSA Portland Cement Company

1000 Midland Building

Cleveland 13, Ohio

SALES OFFICES

Cleveland, Ohio
Chicago, Illinois
Pittsburgh, Pa.
Milwaukee, Wisc.
Toledo, Ohio
New York, N. Y.
York, Pennsylvania

WHITE • WATERPROOFED WHITE • GRAY
WATERPROOFED GRAY • AIR ENTRAINING • STONESET
HIGH EARLY STRENGTH • BRIKSET
WHITE TILE GROUT CEMENT

MAKERS OF AMERICA'S FINEST PORTLAND CEMENTS FOR OVER SIXTY YEARS

How another advertiser found out for himself that architects prefer Architectural Record

Arthur E. Smith Advertising and its client, Timber Structures, Inc., recently investigated *independently* the reading preferences of architects.

They prepared a questionnaire and mailed it to 3,000 architects on Timber Structures' own mailing list.

What they found out (see letter opposite) resulted in an exclusive 1954-1955 advertising schedule in just one architectural magazine, *Architectural Record*.

The Arthur E. Smith Timber Structures study is the 61st out of 68 independently sponsored surveys in which architects and engineers have recorded their steady preference for Architectural Record.

Architectural Record has won 31 out of 32 such independent studies since 1951 . . . an important reason why in the first nine months of 1954 Architectural Record carried 44% more advertising pages than the second magazine in its field, 59% more than the third magazine.

Sixty-one out of 68 independently sponsored studies are strong evidence of the steady preference of architects and engineers for Architectural Record.

However, if you're just naturally sceptical about sixty other people's surveys, we urge you to do what so many other manufacturers and agencies have done—find out which architectural magazine architects and engineers prefer by *asking them yourself!*

An important note for advertisers who want to know FOR SURE how much building market coverage their advertising dollars will buy.

Architectural Record is the one magazine that has access to *Dodge Reports of building planning activity* which provide the names and addresses of the responsible architect and engineer on each new building project, nonresidential or residential, large or small.

By checking its subscriber galleys against *Dodge Reports*, Architectural Record can offer you *sure* and *verifiable* coverage of over 85% of the total architect-designed building market. This is an *exclusive* advertising value.

ARTHUR E. SMITH



Terminal Sales Building - Portland 5, Oregon - Telephone BR 9402

October 13, 1954

Mr. Jerry Howell
ARCHITECTURAL RECORD
209 Post Street
San Francisco, California

Dear Jerry:

As you know we have just completed a survey among the architects on the mailing list of our client, Timber Structures, Inc. to determine the architectural publication which is most useful to them. Roughly, questionnaires were sent to every other architect on the list.

Here are the results of the survey:

Number of cards mailed - - - - -	3,000
Responses received - - - - -	718 (23.9%)
Responses indicating no preferences - - - - -	65
Responses indicating preference - - - - -	653

Record of Preferences

	<u>Architectural Record</u>	<u>Architectural Forum</u>	<u>Progressive Architecture</u>
Number mentions with clear preference for one publication only	179 (39%)	138 (30.1%)	142 (30.9%)
Mentioning two publications, with no preference for either	84 (42.6%)	56 (28.4%)	57 (29.0%)
Mentioning three publications with no preference indicated	$\frac{105}{368}$ (37.9%)	$\frac{105}{299}$ (30.8%)	$\frac{105}{304}$ (31.3%)

Using the above results as our guide we have again recommended ARCHITECTURAL RECORD to carry the Timber Structures message to architects, and have issued our space order for a total of 8½ pages for the next 12-month period.

Yours very truly,

ARTHUR E. SMITH ADVERTISING

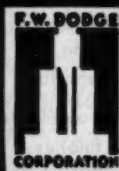
Arthur E. Smith

AES:pen

cc: Elton Ellis

Results of six other studies of reader preference SPONSORED BY ADVERTISERS AND AGENCIES in recent months

	Group Surveyed	Replies	Arch. Record	Arch. Forum	Prog. Arch.
Federal Seaboard Terra-Cotta Corp.	1000 architects on manufacturer's list	28.6%	64	52	55
Fleet of America, Inc.	1000 architects on distribution list for Sweet's Architectural File	13.9%	69	54	51
Electro-Solv-A-King Corp.	1300 architects and engineers on manufacturer's list	16.1%	75	65	75
Ceco Steel Products Corp.	2000 architects and engineers on distribution list for Sweet's Architectural File	11.3%	44	23	26
Gate City Sash & Door Co.	Manufacturer's list of architects	not given	72.9%	60.5%	69.4%
Kammann Mahan, Inc.	1000 architects on distribution list for Sweet's Architectural File	not given	41.4%	24.0%	34.6%

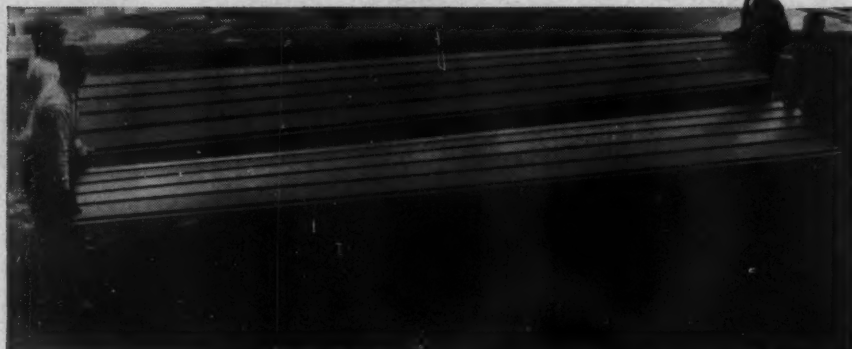


Architectural Record

Workbook of the
active architect
and engineer!!

119 West 40th Street, New York 18, N. Y.

LAY A "SQUARE"... with only TWO PANELS!



**Speed Roof Construction... Cut Costs
with Longer, Wider**

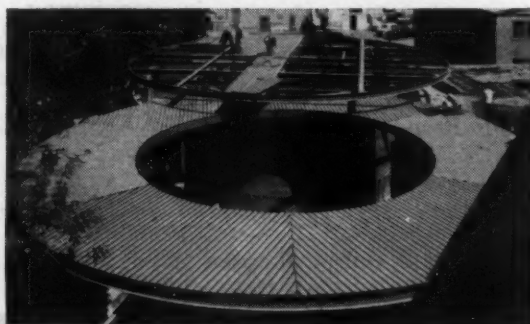
AIRTHERM DECKING

Now Airtherm Steel Roof Deck is available in 20-foot, 4-inch lengths, 30 inches wide (the widest roof deck made).

It takes only two panels to cover a full 100 square feet.

Erection is faster because the reduced number of joints require fewer welds.

*You'll
Value its
Versatility!*



18-Gauge Airtherm Roof Deck	Properties
Section Modulus (in.) 3	.220
Moment of Inertia (in.) 4	.263
Resisting Moment (lbs.)	3960

Airtherm Decking is also available in 20 and 22-Gauge thicknesses in painted or galvanized finishes.



For more complete
information consult our
catalog in Sweet's
Architectural File 2dAi,
or write...

MANUFACTURING COMPANY

747 South Spring Ave., St. Louis 10, Mo.

Member: Metal Roof Deck Technical Institute

West Coast Office: 190 MacArthur Boulevard, Oakland 10, California

THE RECORD REPORTS

WASHINGTON

(Continued from page 254)

originally was asked to authorize 150,000 units over a six-year period, 25,000 of them for the first fiscal period. Greatest need was said to be for one-, two-, three- and four-bedroom multi-family type dwellings for enlisted men.

The first construction is still well in the future. After hurdling the appropriations bill limitations, which include certification that Wherry Act housing cannot be constructed in lieu of the direct appropriation shelter, the services have to clear with Housing and Home Finance Agency as to available rental housing in the areas concerned.

U.S. SEES 1955 BUILDING AT \$39.5 BILLION RECORD

The annual joint forecast of construction prospects by the U. S. Departments of Commerce and Labor anticipates another record year in 1955, with an estimated total of \$39.5 billion, seven per cent over the record \$37 billion 1954 was expected to register.

The 1955 estimate reflects expected increases in both public and private outlays for construction and in every category except industrial. Biggest single increase is anticipated in nonfarm residential construction, which is put at \$15 billion, an increase of 13 per cent.

Private outlays are expected to rise to \$27,400,000,000, an increase of seven per cent from the 1954 estimated total of \$25,525,000,000. Public outlays are estimated at \$12,100,000,000, five per cent over the 1954 estimate of \$11,475,000,000.

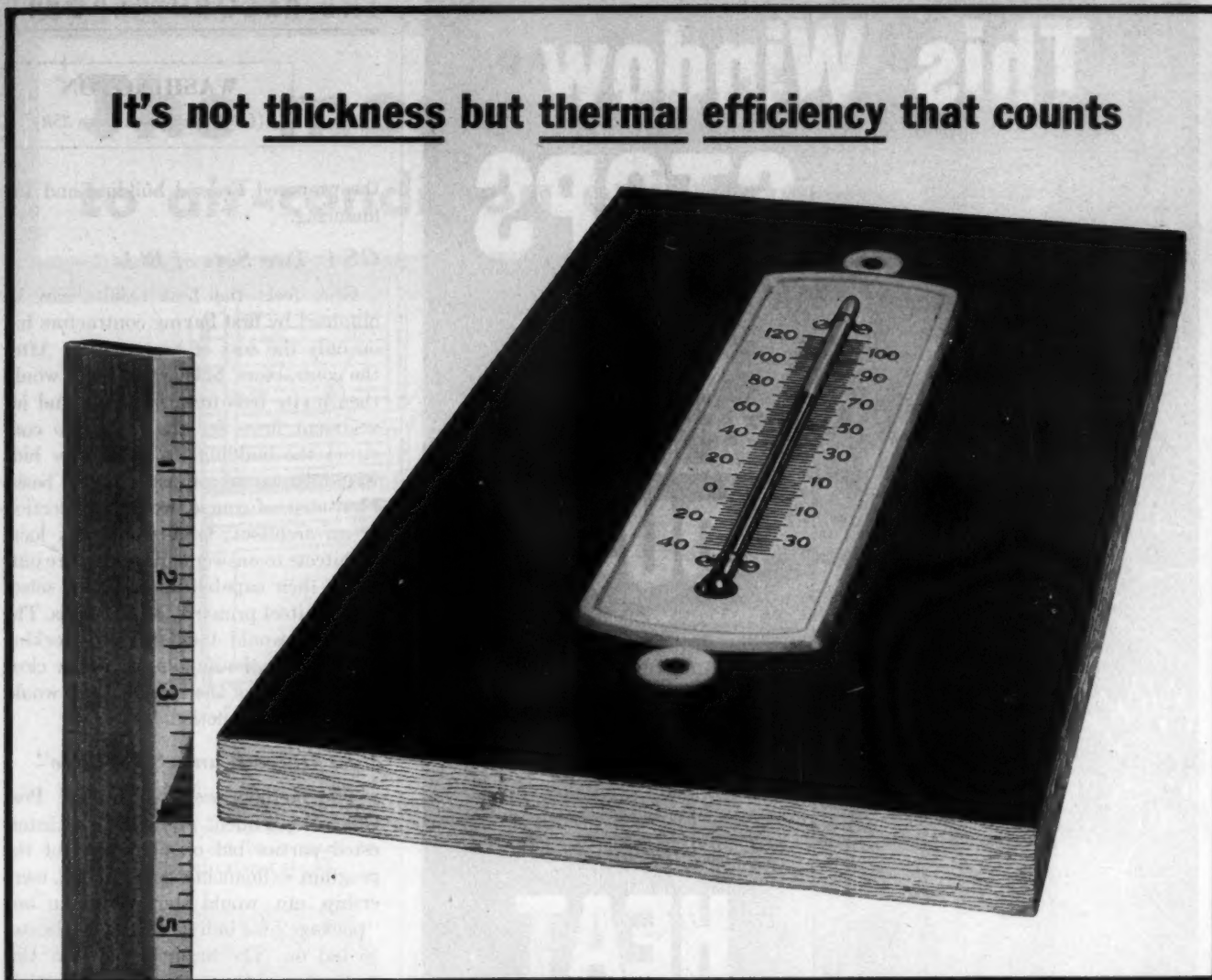
DEBATE TWO SCHEMES FOR RUNNING LEASE-PURCHASE

The Bureau of the Budget and the General Accounting Office last month had before them two plans for carrying out the lease-purchase building program authorized by the last Congress.

The two methods were submitted by the General Services Administration and the Post Office Department. Fundamental difference is in the procedure for taking bids on the actual construction of

(Continued on page 260)

It's not thickness but thermal efficiency that counts



That's why more architects specify Fiberglas than any other roof insulation!

Once upon a time it was the practice of architects to specify roof insulation by thickness. Today, this practice is obsolete because only $\frac{3}{4}$ -inch of Fiberglas* does the same insulating job as a full inch of most other materials. In addition to its exceptionally low "k" factor, Fiberglas Roof Insulation is fire-safe, dimensionally stable, rot-proof, moisture-resistant

and resilient enough to withstand normal traffic loads without rupture. Its light weight and easy workability also save time and labor costs during application.

For complete technical data, see our listing in Sweet's File, or write either to one of the distributors listed below, or to Owens-Corning Fiberglas Corporation, Dept. 68-A, Toledo 1, Ohio.

Distributed East
of the Rockies by



RUBEROID

and through Fiberglas Sales Offices



★Fiberglas is the trade-mark (Reg. U.S. Pat. Off.) of Owens-Corning Fiberglas Corporation.

This Window STOPS WIND

Testing Laboratories report extruded aluminum Fleetlite most airtight of all operating windows.

DUST

Moheir weatherstripping and snug interlocking double sash seal out dust.

NOISE

Double windows protect hospitals, dormitories, offices, hotels and other buildings from outside noise.

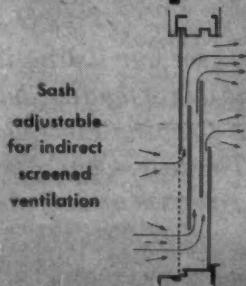
HEAT

Air space between outside and inside sash insulates against heat, makes air conditioning practical.

COLD

Complete weatherstripping and double sash blocks cold, saves fuel costs.

Yet Opens Instantly — Easily



All Sash are cleaned from the inside.
No Maintenance, Nothing to Store.

- ☐ Lists and data on major installations
1. Hospitals 2. Dormitories 3. Hotels 4. Offices
- ☐ Chart of Standard Window Sizes
- ☐ Typical Installation Details
- ☐ Samples of Extrusions

Gentlemen: Please rush the material checked above.

Name _____

Address _____

City _____

Fleetlite
AMERICA'S Finest WINDOW

FLEET OF AMERICA, INC., 407 Dun Building, Buffalo 2, New York

THE RECORD REPORTS

WASHINGTON

(Continued from page 258)

the proposed Federal building and the financing.

GSA: Two Sets of Bids

GSA feels the best results can be obtained by first having contractors bid on only the cost of construction. After the contractors' bids are in, GSA would then invite bids from financing and investment firms for the money to construct the building. In both cases bids would be on a competitive bid basis. First step, of course, would be selection of an architect; GSA would ask local architects to answer a questionnaire outlining their capabilities and then select the architect primarily on this basis. The architect would then produce working drawings on the building to follow close specifications of the agency. GSA would supervise construction.

Post Office Wants "Package"

The method preferred by the Post Office Department would have all interested parties bid on all phases of the program — financing, construction, ownership, etc. would thus be all in one "package" for individuals or syndicates to bid on. The argument is that this method would save administrative time and effort, bring more competitive prices and make temporary ownership of the building more palatable to industry. Private architects would also be used under this setup, producing the working drawings from schematics which the Post Office Department's Bureau of Facilities is now working on.

ADDENDA

NEW CONSTRUCTION put in place in November totaled \$3.3 billion, eight per cent above November 1953 and a new record for the month, according to preliminary estimates prepared jointly by the U. S. Departments of Commerce and Labor. Private outlays of \$2.4 billion were at a new November high; public outlays, at \$0.9 billion were about the same as November 1953. Expenditures for private residential, office building and church construction were at all-time highs; and industrial building showed an upturn for the second consecutive month.

(Continued on page 264)

The most practical way to air-condition existing buildings!



CONSOLE MODEL: Superbly styled and finished . . . blends with any interior. Developed for free-standing installation, yet can be recessed so only six inches of cabinet shows.

Modine
AIRditioners

Recommended for multi-room
installation in office and
apartment buildings . . . hotels
and motels . . . hospitals
and homes

— with types and sizes
for every application



CEILING MODEL: Deluxe unit for exposed installation on ceiling. Saves floor and wall space.



CONCEALED MODEL (front panel cut-away): Designed for easy, out-of-sight installation in the wall.



OVERHEAD MODEL: Available with or without plenum and filters for use in furred overhead space.

• Are you faced with the problem of air conditioning existing buildings? Investigate the Modine AIRditioner*—equally suitable for new construction and modernization work. AIRditioners save the cost of installing duct systems. Choice of 4 distinct types helps you avoid structural alterations. Frequently used to replace radiators where year 'round comfort is desired. Cold water from a central chiller or other source is piped to each unit for summer cooling. Heating is accomplished with hot water from a central source. The same piping—water supply and return and drain—serves each unit for both cooling and heating. Yet AIRditioners are individually controllable!

For facts, call the Modine representative listed in your classified phone book, or mail the coupon today.

*Trademark



MODINE MFG. CO.
1510 DeKoven Avenue, Racine, Wisconsin

Gentlemen: Please send me a free copy of Bulletin 754-D, describing Modine AIRditioners.

Name

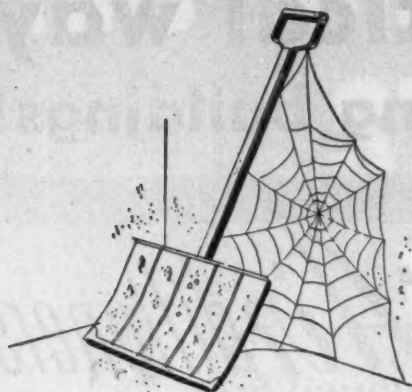
Firm

Address

City Zone State

A-1255

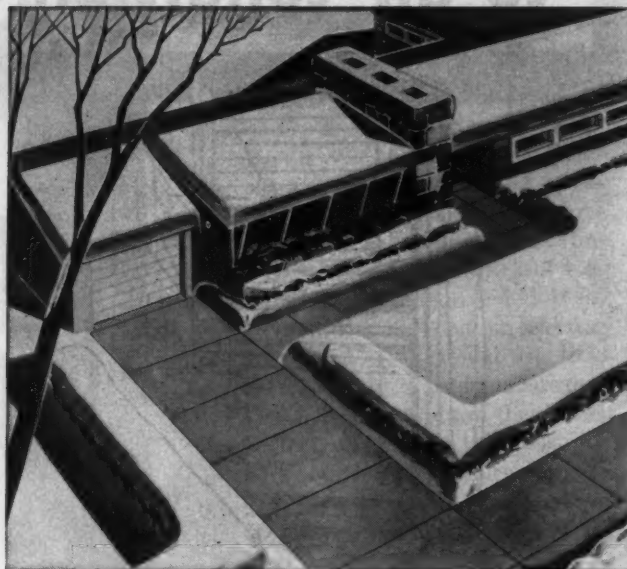
The old snow shovel's gathering dust



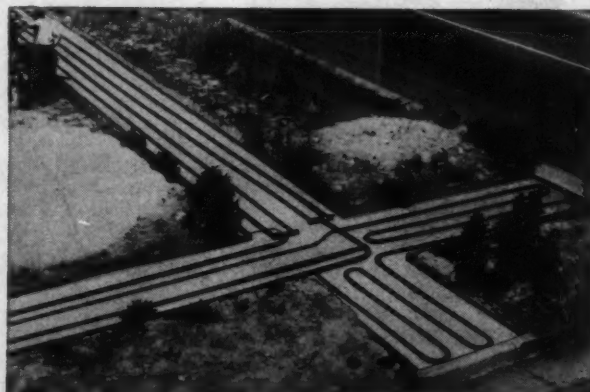
TODAY'S modern snow melting installations have sent many a snow shovel into retirement. In addition to being used for residential sidewalks and driveways, hundreds of snow melting systems have been installed at hotels, office buildings, church entrances, theaters, train platforms, and bus terminals throughout the snowfall areas of the United States.

Besides taking the aching back out of a tiresome winter chore, snow melting systems take the accident and lawsuit hazard out of dangerous, icy sidewalks. Moreover, when used in front of theaters, around department stores and other business establishments, they offer a wonderful psychological advantage. People tend to congregate in these clear areas on bad winter days. Thus, the snow-free sidewalks before a place of business create good will, and the merchandise on display there is seen by large groups of people.

For over 50 years, architects, engineers and contractors have been specifying NATIONAL Steel Pipe for conventional plumbing and heating systems until it has



become the nation's standard for such applications. It is only natural, then, that they should turn to NATIONAL for this relatively new application—snow melting systems. They know that NATIONAL Pipe has the inherent characteristics necessary to meet the requirements of such applications—smooth, uniform bending; sound, strong welding properties; and long service life. Small wonder that such confidence has made NATIONAL Steel Pipe America's largest selling pipe for snow melting service.



NATIONAL TUBE DIVISION, UNITED STATES STEEL CORPORATION, PITTSBURGH, PA.
COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO, PACIFIC COAST DISTRIBUTORS • UNITED STATES STEEL EXPORT COMPANY, NEW YORK

U·S·S NATIONAL *Steel* PIPE



UNITED STATES STEEL

REINFORCED CONCRETE

chosen for
CHICAGO's nine new
parking garages

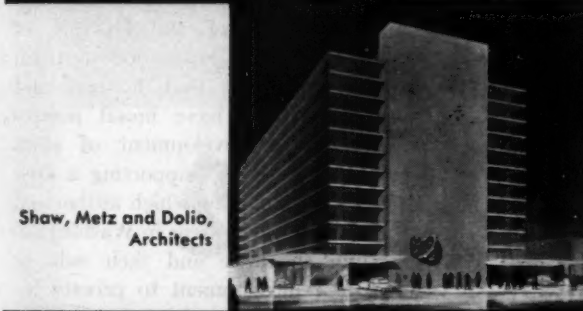
Each of the nine parking garages in Chicago's new \$50,000,000 program to provide adequate parking facilities will be built of reinforced concrete. It provides greater economy, inherent fireproof qualities, weather resistance, design adaptability, attractive appearance, low maintenance costs, and availability of materials. On your next job, too . . . design for reinforced concrete.



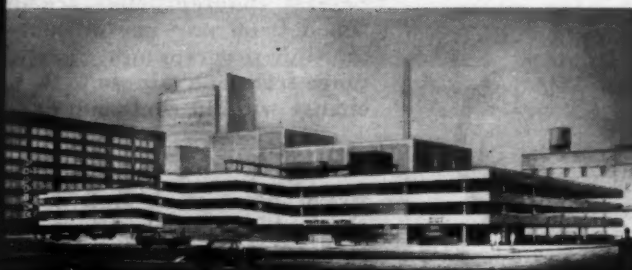
Graham, Anderson,
Probst and White,
Architects



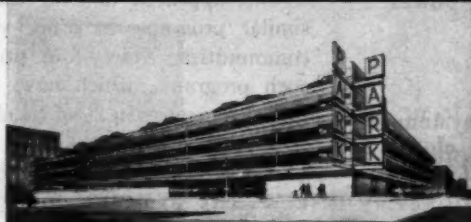
Loebl, Schlossman
and Bennett,
Architects



Shaw, Metz and Dolio,
Architects



Everett F. Quinn and
Associates,
Architects



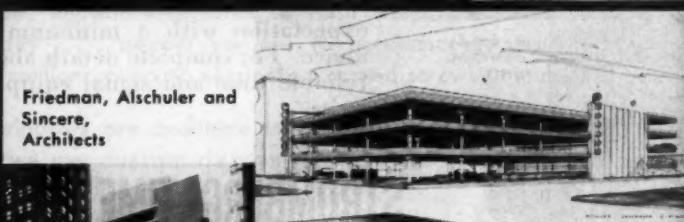
Schmidt, Garden
and Erickson,
Architects



Naess and Murphy,
Architects



Holabird and Root
and Burgee,
Architects



Friedman, Alschuler and
Sincere,
Architects

McClurg, Shoemaker
and McClurg,
Architects

CONSULTING ENGINEERS:
De Leuw, Cather & Co.



38 South Dearborn Street • Chicago 3, Illinois

CONCRETE REINFORCING STEEL INSTITUTE

CHICAGO DEPARTMENT OF
PUBLIC WORKS:
George Dement, Commissioner
Dick Van Gorp, Chief Engineer
M. J. Glicken, Architect

Stromberg
always rings the bell
at the right time



MODERN
SQUARE
CLOCK



ROUND
WALL
CLOCK



MASTER
CONTROL
UNIT



SIGNAL
BELL

Ask, too, about
Fire Alarm Equipment
Attendance Recorders
Time Stamps

TEACHERS CAN RELY ON STROMBERG TIME

Signals for class changes are dependable. The right bell rings at the right time.

SCHOOL OPERATIONS FLOW SMOOTHLY

Several different class schedules can be timed from one master control having a multiple program unit. Signal intervals can range from one minute to 24 hours. Classes change without confusion or waste of time.

CLOCKS ARE CONSTANTLY ACCURATE

Every hour, each unit is automatically checked and synchronized with a Master Unit. Protection against power failure is provided through a jewelled spring power reserve in the Master Unit.

CHOOSE THE SYSTEM YOU WANT

For new schools, or to replace old systems now in use, there are Stromberg clocks and program time controls to meet every desire — and every need.

GUARANTEED FOR QUALITY AND SERVICE

Users of long standing know that Stromberg equipment lasts years beyond normal expectation with a minimum of maintenance. For complete details about the most reliable time and signal equipment made, write

STROMBERG TIME CORPORATION

Subsidiary of General Time Corporation

THOMASTON



CONNECTICUT

If it's time • it's Stromberg

THE RECORD REPORTS

WASHINGTON

(Continued from page 260)

SUPPLIES OF BUILDING MATERIALS will be adequate for this year's predicted record volume of construction, including the 1,300,000 private dwelling units, according to the Department of Commerce. Only possible trouble spot foreseen is in Portland cement, though the Department says there could be temporary shortages of other materials in certain localities. As for prices, the Department says the outlook is for "stable prices" on building materials throughout the year, although costs have been "inching up very, very slowly."

THE SUPREME COURT, upholding the Constitutionality of the District of Columbia Redevelopment Act of 1945, ruled unanimously that Federal and State legislatures have broad powers to authorize redevelopment of slum areas. The decision, supporting a District of Columbia law which authorized acquisition of large areas in Washington for slum clearance and their sale or lease for redevelopment to private interests, appeared to clear the way for similar programs in other states and communities. Thirty-four states have such programs, which have been sustained by courts in 20 of them.

CLARKSVILLE, TENN., became the first U. S. city to qualify for Federal aid for urban renewal under the Housing Act of 1954 when its "workable plan" was certified by the Slum Clearance and Urban Redevelopment Division of the Housing and Home Finance Agency. Chicago was the first of a half dozen large cities to submit their plans by last month. Approval of a "workable plan" for redevelopment is a prerequisite to Federal aid for any community.

THE AIR FORCE published a new booklet containing instructions on the conduct of all Air Force purchasing and contracting. Procurement policies and procedures are covered in detail. The booklet is keyed numerically to the Armed Services Procurement Regulations so that Air Force procurement officials and private contractors can locate appropriate instructions for particular cases quickly. Duplication and overlapping is eliminated.

(More news on page 268)



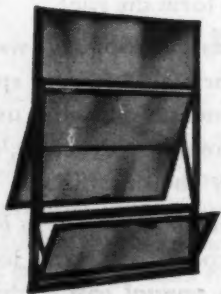
for Maximum Daylight...

Monson Academy, Springfield, Mass.

Baker & Dingman,
Architects
William Belbin,
General Contractor

Specify VAMPCO

INTERMEDIATE PROJECTED WINDOWS



VAMPCO All-Aluminum Intermediate Projected Windows are available in many styles and sizes, varying in number and shapes of panes. Window will accommodate either "Twindow" or "Thermopane" glazing up to 5/8" thickness and is designed for easy screening.

Design of the VAMPCO Intermediate Projected Windows in the Monson Academy provides an abundance of daylight in the beautiful structure that adapts itself to the rolling Massachusetts terrain.

VAMPCO All-Aluminum Intermediate Projected Windows are designed primarily for use in schools, hospitals, office buildings and industrial construction . . . and incorporate such new, important features as flash welding of ventilator corners for greater rigidity . . . deeper sections to accommodate insulated glass . . . and snap-on mullion covers to eliminate exposed screws at mullions.

VAMPCO All-Aluminum windows are available in over one hundred standard types and sizes . . . or we can custom design windows to your individual requirements.

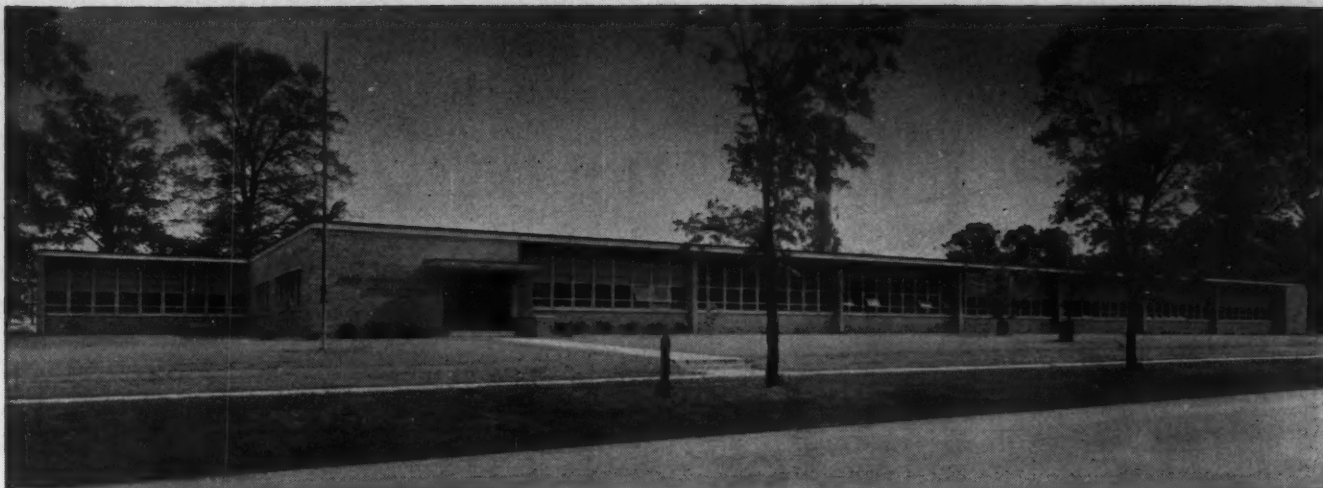


See our listing in Sweet's Architectural File . . . and write for Free Catalog to Department AR-15

A NAME THAT MEANS THE VERY FINEST IN LIFE-LONG ALUMINUM WINDOWS

VALLEY METAL PRODUCTS COMPANY
PLAINWELL, MICHIGAN

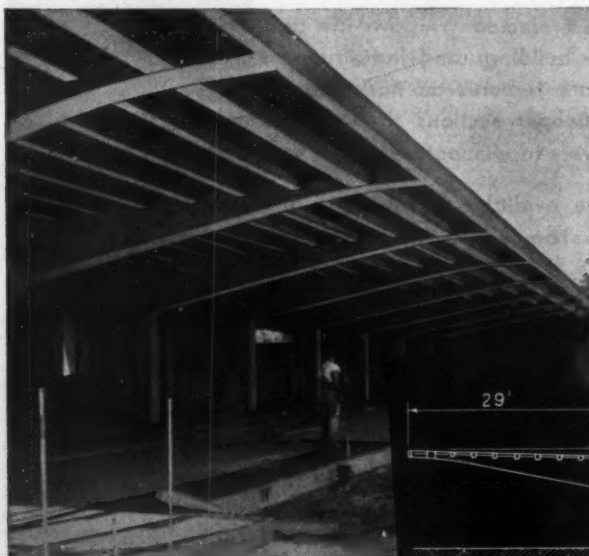
A SUBSIDIARY OF MUELLER BRASS CO. • PORT HURON, MICHIGAN



Merle Sidener School, Indianapolis. Architects: Daggett, Naegle & Daggett; engineers: Fink & Roberts; contractor: Cannon Construction Co.



Above: The all-concrete roof covers two rows of outside classrooms and a central corridor. With its overhang, the roof is 68 ft. wide. Below: 29-ft. concrete cantilever beams extend from corridor columns over the classrooms and exterior walls.



Right: cantilever beams extend across auditorium from opposite walls, meet at center. Floor here is lowered 4 ft.

Concrete and Cantilever Design Cut Costs for Modern School

Attractive, modern appearance distinguishes this fine school, completed at a cost of only 92¢ per cu. ft.—20 to 25 per cent less than the cost of other new buildings of comparable size and quality in the area.

Concrete cantilever beams at 17' 2" centers are an outstanding feature in the design. Supported on twin concrete columns that form a central corridor, they extend beyond the exterior walls of the classrooms as roof overhang. Concrete ribs between the cantilever beams carry lightweight precast concrete panels that form the roof.

In the auditorium, cantilever beams from opposite walls join at the center of the room to form a 58-ft. roof span (see drawing below). Exposed concrete masonry, used for partitions and backup throughout the structure, assures maximum firesafety, economy and durability.

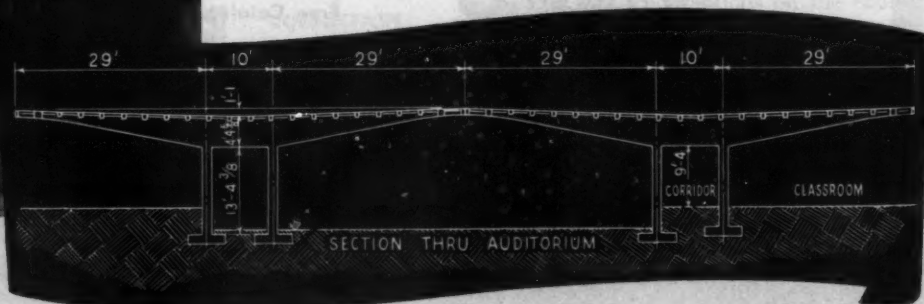
Concrete construction for schools is moderate in first cost, means lower maintenance expense and extra long life. These factors add up to **low annual cost**—which pleases school officials and taxpayers alike.

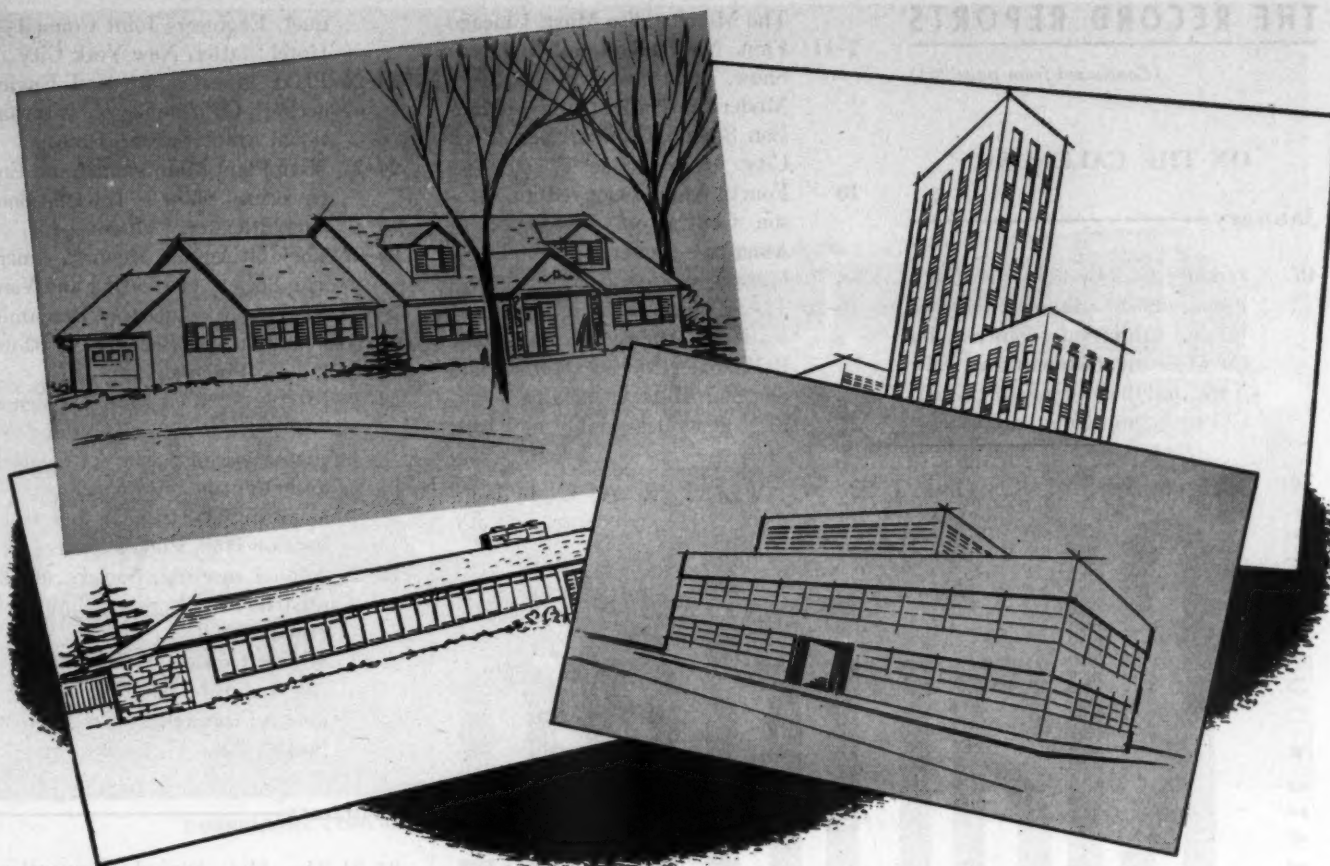
Write for free booklet on concrete school design and construction, distributed only in the U. S. and Canada.

PORTLAND CEMENT ASSOCIATION

Dept. A1-8, 33 West Grand Avenue, Chicago 10, Illinois

A national organization to improve and extend the uses of portland cement and concrete... through scientific research and engineering field work





From residence to research lab write in this spec for permanence: **"CAST IRON SOIL PIPE"**

What do you specify when a soil or waste line is to be buried in concrete? **Cast iron soil pipe**, of course. You write in cast iron for stacks and branches. Then why connect cast iron to materials that can rust out?

It's so easy to make the whole drainage system permanent. When you specify cast iron soil pipe for the

house sewer, the building drain; and the waste, soil and vent stacks; you write into your project permanence that measures up to that of your structural materials.

In dwellings, institutions and buildings for science, industry and commerce, assure the permanence of the sanitary system. From street sewer to rooftop, *specify cast iron soil pipe.*

PERMANENT CAST IRON SOIL PIPE

has *all* these advantages

- Rugged metallic strength
- Zero moisture absorption
- Permanent tightness of joints, with flexibility
- Acceptance in all codes for use under basement floors

CAST IRON SOIL PIPE INSTITUTE

Dept. AR-1, 1627 K Street, N. W.
Washington 6, D. C.

- ☐ Send educational folder, "Plumbing Drainage."
- ☐ Our local Club wants to see your movie, "Permanent Investment." Tell us how to arrange for use of film, free.



THE MARK OF
QUALITY AND
PERMANENCE

Name _____

Address _____

City _____

Zone _____

State _____

THE RECORD REPORTS

(Continued from page 264)

ON THE CALENDAR

January

4ff January 1955 Good Design Exhibition, newest edition of the continuing exhibition sponsored by the Museum of Modern Art, New York, and the Merchandise Mart, Chicago; throughout the year —

- 7-11 The Merchandise Mart, Chicago
First National Retail Industry Show, sponsored by the Store Modernization Institute — Madison Square Garden, New York City
- 10 Fourth Annual Convention, Mason Contractors Association of America — Jefferson Hotel, St. Louis
- 16-20 The 11th Annual Convention, National Association of Home Builders — Conrad Hilton and Sherman Hotels, Chicago
- 21 First general assembly and ban-

- quet, Engineers Joint Council — Hotel Statler, New York City
- 24-26 Plant Maintenance and Engineering Conference — International Amphitheater, Chicago
- 24-27 Sixth Plant Maintenance and Engineering Show — International Amphitheater, Chicago
- 24-27 The 61st Annual Meeting, American Society of Heating and Ventilating Engineers — Benjamin Franklin and Bellevue-Stratford Hotels, Philadelphia
- 24-28 International Heating and Ventilating Exposition, sponsored by the American Society of Heating and Ventilating Engineers — Commercial Museum and Convention Hall, Philadelphia
- 26-28 Annual meeting, Society of Industrial Realtors — Shamrock Hotel, Houston
- 31ff Winter General Meeting, American Institute of Electrical Engineers; through Feb. 4 — Hotel Statler, New York City

February

- 21-24 The 31st Annual Convention, American Concrete Institute — Hotel Schroeder, Milwaukee
- 23-25 Annual Joint Conference on Church Architecture, sponsored by the Church Architectural Guild of America and the National Council of Churches' Bureau of Architecture — Netherlands-Plaza Hotel, Cincinnati
- 24-25 The 11th Annual Conference, National Adequate Wiring Bureau — La Salle Hotel, Chicago
- 26ff Regional convention, American Association of School Administrators; through March 2 — St. Louis

March

- 12-16 Regional convention, American Association of School Administrators — Denver
- 12-19 Ninth Pan-American Congress — Caracas
- 15-17 Utilization of Aluminum Conference, sponsored by the American Institute of Electrical Engineers — William Penn Hotel, Pittsburgh

OFFICE NOTES

Offices Opened

- Martin M. Cooper has announced the formation of the new firm Cooper and
- (Continued on page 272)

FABRICORK • NUCORK • GRAPHOLITE • STRUCTOPLATE • DURACITE

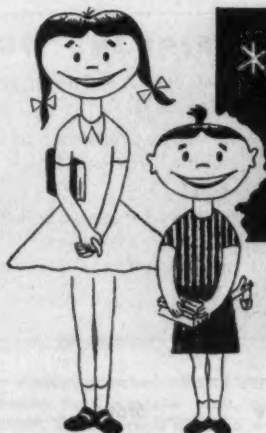
• ASBESTOCITE • VITRACITE

Claridge

PROVIDES ALL NEEDS IN CHALKBOARDS and BULLETIN BOARDS

The Record shows... Claridge pioneered a phenomenal number of Chalkboard FIRSTS!... new improvements now nearly all adopted by the Industry. This quest for better materials and manufacturing continues... helping further to make CLARIDGE a distinguished name in the field. Hundreds of Architects and School Administrators enthusiastically recommend CLARIDGE Chalkboards.

GRAPHOLITE... low price, good quality. **STRUCTOPLATE**... fine performance under all conditions, all types of buildings. **DURACITE**... 100 years performance under average use. **ASBESTOCITE**... most revolutionary cement asbestos chalkboard in 25 years! **VITRACITE**... vitreous porcelain enamel steel chalkboard, guaranteed for life of any building.



CLARIDGE meets your most exacting requirements



For full information refer to our complete Catalog in SWEET'S FILE 21e CI

CLARIDGE PRODUCTS & EQUIPMENT INC.
6733 N. OLMSTED AVE. • CHICAGO 31, ILL.



DURAPLASTIC CONCRETE used for frame at retail-store building for Sears, Roebuck and Company.

For Workability and Easy Placement — Structural Concrete Made With DURAPLASTIC*

Whenever you design in reinforced concrete, it will pay you to consider the many advantages of concrete made with Duraplastic air-entraining portland cement. Throughout the building field, architects, builders and contractors have learned to rely on the outstanding performance of this superior cement.

Contractors report easier placement, improved surface appearance with Duraplastic-made concrete. That's because mixes made with Duraplastic are more workable, more cohesive . . . are easy to place properly in forms and around reinforcing. Less mixing water is needed for a given slump. Construction work progresses smoothly and rapidly.

Duraplastic also minimizes water gain and segregation . . . gives finished concrete greater durability. Specify concrete made with Atlas Duraplastic on your next job.



COMPLETED Sears, Roebuck and Company retail-store bldg., Waco, Texas. Architect: George L. Dahl. Contractor: W. S. Bellows Const. Corp., Houston, Texas.

YET DURAPLASTIC COSTS NO MORE! It sells at the same price as regular cement and requires no unusual changes in procedure. Complies with ASTM and Federal Specifications. For descriptive booklet, write Universal Atlas Cement Company (United States Steel Corporation Subsidiary), 100 Park Avenue, New York 17, N. Y.

OFFICES: Albany, Birmingham, Boston, Chicago, Dayton, Kansas City, Minneapolis, New York, Philadelphia, Pittsburgh, St. Louis, Waco.

*"Duraplastic" is the registered trade-mark of the air-entraining portland cement manufactured by Universal Atlas Cement Company.



DURAPLASTIC

AIR-ENTRAINING PORTLAND CEMENT



Makes Concrete at No Extra Cost

UNITED STATES STEEL HOUR—Televised alternate weeks—See your newspaper for time and station

ICE on demand...

Vogt

Package
Unit
Automatic

TUBE-ICE MACHINES

are the choice of
leading hotels, hospitals, restaurants
and institutions everywhere



5000 lb. and 2000 lb.

Capacity package Units

Send For Bulletins



The demand for **MORE ICE RIGHT AWAY**, at any hour of the day or night, is taken in stride by Vogt Tube-Ice units in hundreds of hotels, clubs, hospitals, restaurants, and institutions everywhere. And that with maximum economy since they occupy less space, have fewer parts, operate automatically, and use less power per ton of ice.

Clear, hard, Tube-Ice is quickly frozen from water circulating inside of tubes of small diameter and need never be touched by human hands. Either cylinder or crushed ice may be had from the same unit with the flick of a switch.

In addition to package units, custom built types are available from 3 tons up to any required capacity.

Write us today for descriptive literature.

HENRY VOGT MACHINE CO.

Louisville 10, Ky.

BRANCH OFFICES: New York, Philadelphia, Chicago, Cleveland, St. Louis, Dallas, Charleston, W. Va.



Since

HOPE'S

1818

STEEL WINDOWS HAVE THE STRENGTH AND RIGIDITY THAT NO OTHER WINDOW CAN MATCH



North Street Elementary School, Greenwich, Conn.

Sherwood, Mills & Smith, Architects

A. Barbaresi & Son, Inc., Builders

The Extensive Use of HOPE'S Steel Window Walls Provided Substantial Savings in the Cost of this Handsome, Modern School

More and more, architects are using Hope's Steel Window Walls not only because of the substantial savings effected but because of their greater strength and rigidity which permit row upon row of uninterrupted floor-to-roof framing as in the building shown. The architect may insert doors, fixed sash, ventilators and insulated panels wherever needed. Here, each class-room contains its own outside door, a most desirable feature. In addition, there is an abundance of controlled natural light and well-planned, draft-free ventilation. The space-saving insulated panels at sill make available many extra square feet of floor space usable for cupboard storage, heating units, etc. Hope's Window Walls require a minimum of maintenance and last the life of the building.

Write for Catalog 134AR

HOPE'S WINDOWS, INC., Jamestown, N. Y.

THE FINEST BUILDINGS THROUGHOUT THE WORLD ARE FITTED WITH HOPE'S WINDOWS

THE RECORD REPORTS

(Continued from page 268)

Associates, Consulting Engineers. Other members of the firm, which has offices at 105 W. 40th St., New York 18, N. Y., are Stephen Adley, Lewis Alan Berne and Jay Cooper.

• T. E. Eden, Architect, has established offices at the Adams Hotel, P.O. Box 874, Phoenix, Ariz.

• Howard William Frank, A.I.A., has announced the opening of his new office for the practice of architecture. His address is 9019 Beverly Blvd., Los Angeles, Cal.

• William W. Landsberg, Architect, has opened offices at 5 Tianderah Rd., Port Washington, N. Y., for the practice of architecture and interior design. Mr. Landsberg was formerly office manager with Marcel Breuer.

• B. I. Petri, A.I.A., announces that he

has opened offices on Lake Minnetonka, Navarre, Minn.; he was formerly with the firm of Magney, Tusler and Setter of Minneapolis.

• The new architectural firm of Taylor Warren Nishimoto & Connor is composed of architects William Henry Taylor, A.I.A., Kenneth M. Nishimoto, A.I.A., and George S. Conner and office manager R. Lynd Warren. Offices are at 285 S. Los Robles, Pasadena 5, Cal., and at 8323 La Bajada Ave., Whittier, Cal.

• Wm. Alexander Trimble, A.I.A., and Merrill S. Rich announce the formation of the partnership Rich and Trimble & Associates, with offices at 4507 University Way, Seattle 5, Wash.

Firm Changes

• Charles Bennett, formerly Director of Planning for the City of Los Angeles, has joined Pereira & Luckman, planners, architects and engineers, as an associate of the firm. Offices are located at 9220 Sunset Blvd., Los Angeles, Cal.

• Donald G. French, Architect, has joined Donnell E. Jaekle in the firm to be known as Donnell E. Jaekle, Architect; Donald G. French, Associate Architect. The firm's address is Professional Center Bldg., 586 N. First St., San Jose 12, Cal.

• Robert L. Niles has joined LaPierre, Litchfield & Partners (Alfred Hopkins & Associates), the firm announces. Offices are at 415 Lexington Ave., New York 17, N. Y.

• Sherwood, Mills & Smith, Architects, have announced the appointment of Garrell S. McNulty Jr., A. Raymond von Brock and Thomas A. Norton as associates of the firm; all three have been connected with the firm, which is located at 65 Broad St., Stamford, Conn.

• Morgan Stedman, A.I.A., has announced his association with Russell Williams, A.I.A., in a partnership to be known as Stedman and Williams. Offices are at 651 Hamilton Ave., Palo Alto, Cal.

New Addresses

John G. Becker, Architect-Engineer, 209 N. Van Buren, San Angelo, Tex.

(Continued on page 276)

just off the press ... and yours for the asking!

ALUMILINE 1955 CATALOGS



Practical and specific, expressly planned and prepared with your needs in mind, are these two reprints from Sweet's 1955 File. Many new innovations are shown in both catalogs. Among them is featured GOLD LITE, the new Non-Fading Gold Alumilite Finish. Use the coupon to request your copies of either or both TO-DAY. No obligation, of course.

ALUMILINE Store Front Construction

Includes detailed specifications and sectional drawings of Sash and Bead, Sash, Sill and Jamb, Bars and Mullins, Sills, Heads and Facia, Facia and Pilaster Covers, Curtain Wall Sections, Closure Members, Awning Flaps, and Structural Shapes. A very practical and useful working manual.

ALUMILINE Entrances and Doors

Complete, detailed information for quick, convenient reference. Includes drawings of Glass and Wood Door Frames, Narrow Stile, Wide Stile and Center Panel Doors, Frame Sections, photos of Floor Check Settings, Door Hardware, including many special applications.

- Extruded Aluminum Store Front Construction
- Extruded Aluminum Factory Assembled Entrance Frames
- Narrow and Wide Stile Extruded Aluminum Doors
- Custom Built Extruded Aluminum Windows

ALUMILINE products are specified by America's leading architects for: Hospitals, Schools, Religious Buildings, Banks, Store Fronts, Office Buildings, Industrial Plants, Housing Projects, Shopping Centers, etc.

ALUMILINE

ALUMILITED EXTRUDED ALUMINUM PRODUCTS

ALL ALUMILINE products are sold and installed by Distributors and Dealers throughout the U. S., Canada, and other Countries.

the
ALUMILINE corp.
Dunnell Lane, Pawtucket, R. I.

MAIL COUPON TODAY...

the ALUMILINE corp., Dept. R
Dunnell Lane, Pawtucket, R. I.

Please send, without obligation, copies of your new 1955 Catalogs, as follows:

- ☐ ALUMILINE Store Front Construction
- ☐ ALUMILINE Entrances and Doors

Firm.....

By.....

Address.....

City.....State.....

For modern multi-story buildings...

REYNOLDS 100 SERIES

Vertically pivoted

ALUMINUM WINDOWS

This window meets both the design requirements and the special functional needs of today's multi-story buildings. It provides the minimum air infiltration important in air conditioning, and the positive locking essential to safety. Yet this airtight window is easily opened for washing entirely from the inside. Special jamb design accurately positions window in fully closed and washing positions. All-welded frame construction has self-draining feature. Manufactured to architect's size requirements. Write for catalog. **Reynolds Metals Company, Window Division, 2020 South Ninth Street, Louisville 1, Kentucky.**

New Equitable Life Building, San Francisco, features Reynolds 100 Series Aluminum Windows. Architects: Loubet and Glynn, San Francisco. Consulting Architect: Irwin Clavan, New York. General Contractor: Dinwiddie Construction Company, San Francisco.

Available with or without Hopper Vent. Pivoted vent easily removed. Secures in reverse position for cleaning...locking in both positions. For safety, vent must be fully closed and locked before key can be removed.



**REYNOLDS  ALUMINUM
BUILDING PRODUCTS**

SEE "MISTER PEEPERS," starring Wally Cox, Sundays, NBC-TV Network.

**THE MASTER REFERENCE WORK OF ARCHITECTURE
AND ENGINEERING IN A BRAND-NEW EDITION!**

TIME-SAVER STANDARDS

1954
Edition

MORE THAN 50,000 COPIES SOLD IN PREVIOUS EDITIONS

NOW REVISED AND UPDATED WITH COMPLETE PLANNING DATA ON EVERY MAJOR PHASE OF CONSTRUCTION! CONTAINS 405 DETAILED TECHNICAL STUDIES ON: ARCHITECTURAL DESIGN—MATERIALS TECHNOLOGY—ENGINEERING PRACTICE.

Outstanding Features of The New Edition

- Completely Re-organized and Brought Up-to-Date
- Includes Four Years of New Material
- Nine-page Master Index for Fast Reference
- 405 Technical Studies in Text and Pictures
- 1895 Individual Topics—888 Fact-Crammed Pages

Since 1946 Time-Saver Standards has served as a working partner to thousands of architects, engineers, designers, contractors, and other skilled technicians in the building industry. Users consider this book the one indispensable reference to almost any question of building principle, practice, and procedure. As a working tool on construction projects of every size, description, and dollar value, Time-Saver Standards has saved users many hours of research time, immeasurable extra work, and many costly mistakes—and has saved clients millions of dollars on construction costs.

Collected in this massive volume are thousands of streamlined practices that allow major economies on labor and materials. Proven-in-use solutions to baffling problems and authoritative answers to all questions of structural design, site preparation, and uses of materials can be found in its pages, as can positive help on all matters of size, area, weight, volume, arithmetic formulae, physical properties of substances, and drafting specifications of every kind. No single lifetime would suffice to accumulate so much practical knowledge. Time-Saver Standards contains the hard-core, hard-won experience of thousands of men who have devoted their careers to architecture and building engineering. As such, it is a treasury of information whose value cannot be measured in money.

This latest edition is printed from new plates to assure clear, sharp reproduction of the thousands of photographs, drawings, charts, sketches, and tabular data sheets. Page headings are set in bold, legible type and are uniform throughout. A handsome and durable binding gives this book a distinctive appearance in keeping with its incomparably fine contents.

888 pages 8½ x 11 Approx. 2000 Illustrations \$12.50

Provides Quick, Reliable Answers to Thousands of Questions Like:

- What are the standard symbols for various elements of heating, air conditioning and plumbing systems?
- What formula will compute areas of circular segments? Volumes of solids?
- Which is less costly in a small house? Pre-assembled wood roof trusses, or rafter and joint construction? What is the approximate cost differential?
- What is the simplest way to compute steel beam or girder deflection under various conditions of load?
- What are the advantages and drawbacks of lightweight aggregates? How are they classified? What are the properties of each type?
- What are the advantages of pre-stressed concrete? Its characteristics? Its uses? Its costs?
- How can modular co-ordination be applied to masonry construction? To wall framing of houses?
- How can one compute the thrust produced by a brick arch used to span an opening?
- What procedures are recommended for remodelling foundation walls? Exterior walls? Floors?



**Third
Edition
1954**

BRAND-NEW MATERIAL ADDED TO THE THIRD EDITION

A mass of new material now brings Time-Saver Standards entirely up-to-date on recent advances in building technology. Following are a few of the technical studies now included for the first time:

CHARTS OF WORKING HEIGHTS FOR SCHOOL CLASSROOM EQUIPMENT
MODULAR CO-ORDINATION
CLASSIFICATION SYSTEM FOR ARCHITECTURAL FILES
HARDWARE: INDEX TO USES OF LOCK FUNCTIONS
INSTALLATION OF GAS APPLIANCES
RADIANT HEATING HOT-WATER SYSTEMS FOR HOUSES
STRUCTURAL DESIGN: RIGID FRAMES IN STEEL
STRUCTURAL FORMS: LONG SPANS IN WOOD

STRUCTURAL FORMS: THIN SHELLS OF REINFORCED CONCRETE
STRUCTURAL FORMS: PLYWOOD GIRDS AND GLUED LAMINATED BEAMS
FIREPROOFING WITH LIGHTWEIGHT PLASTER
ARCHITECTURAL PORCELAIN ENAMEL
METAL LATH MEMBRANE FIREPROOFING
STAINLESS STEEL
SCHOOL SHOP PLANNING
ROOF TRUSSES: CONSTRUCTION METHODS
NORTH AMERICAN BUILDING STONES

IMPORTANT: Publication of this new 3rd Edition automatically outdates every other reference book on architectural standards. If you have never used Time-Saver Standards, now is the time to begin. If you own an earlier edition, you will certainly want to replace it with this revised and entirely up-to-date 3rd Edition.

10 DAY FREE EXAMINATION PRIVILEGE

Dodge Books
119 West 40th Street
New York 18, N. Y.

Please send me for 10 days free examination a copy of TIME-SAVER STANDARDS, 3rd Edition (1954). Within 10 days I will either payment for \$12.50, plus postage, or else return the book and nothing.

Name

Address

City Zone State

SAVE POSTAGE: Enclose payment with this order and publisher will pay all handling and postage charges. Same return privilege.

ON THE NEWS FRONT WITH STRUCTURAL STEEL



Factory Building in New England

3000 tons of Bethlehem Structural Steel form the skeleton of the Norton Company's new grinding machine plant at Worcester, Mass. This modern factory is 760 ft long by 360 ft wide, with brick siding up to the eave and corrugated asbestos composition above. Company offices are housed in the 500-ft-wide section in front of the factory.

Engineering and Construction: Gilbane Building Co., Providence, R. I.; *Consulting Architect:* Anderson Nichols Co., Boston; *Steel Fabricator:* A. O. Wilson Structural Co., Cambridge, Mass.

12-Story Apartment Overlooking Hudson

Overlooking the Hudson River at Riverdale, N. Y., just north of New York City, is the 12-story Briarcliff Apartments, a modern red-brick structure built on a framework of over 600 tons of Bethlehem Structural Steel. The building is situated on an acre of ground, and features 77 outside apartments, many with private terraces, and tenant garages and a private playground for children—all only 20 minutes from Times Square.

Architect: Samson V. Becker; *Engineer:* S. Frieman; *Steel Fabricator and Erector:* Grand Iron Works; *Owner:* 236th Street, Inc.—all of New York City.



BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.

*On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation
Export Distributor: Bethlehem Steel Export Corporation*



THE RECORD REPORTS

(Continued from page 272)

Edward Dart, Architect, 201 N. Wells St., Barrington, Ill.

Arthur Fahr, A.I.A., Moultonboro Neck, N. H. (P.O. Center Harbor, N. H.)

Fromherz Engineers, 816 Howard Ave., New Orleans 12, La.

Stanley James Goldstein, A.I.A., 25 Halsted St., E. Orange, N. J.

Burket E. Graf, A.I.A., 521 Continental Bldg., Lincoln, Neb.

Hewitt and Royer, Architects and Engineers, Barclay Bldg., 3619 Broadway, Kansas City 11, Mo.

Grady L. Hicks, Architect, 605 First Federal Bldg., Jackson, Miss.

Hollis Whipple Kincaid, A.I.A., 81 Market Sq., Newington 11, Conn.

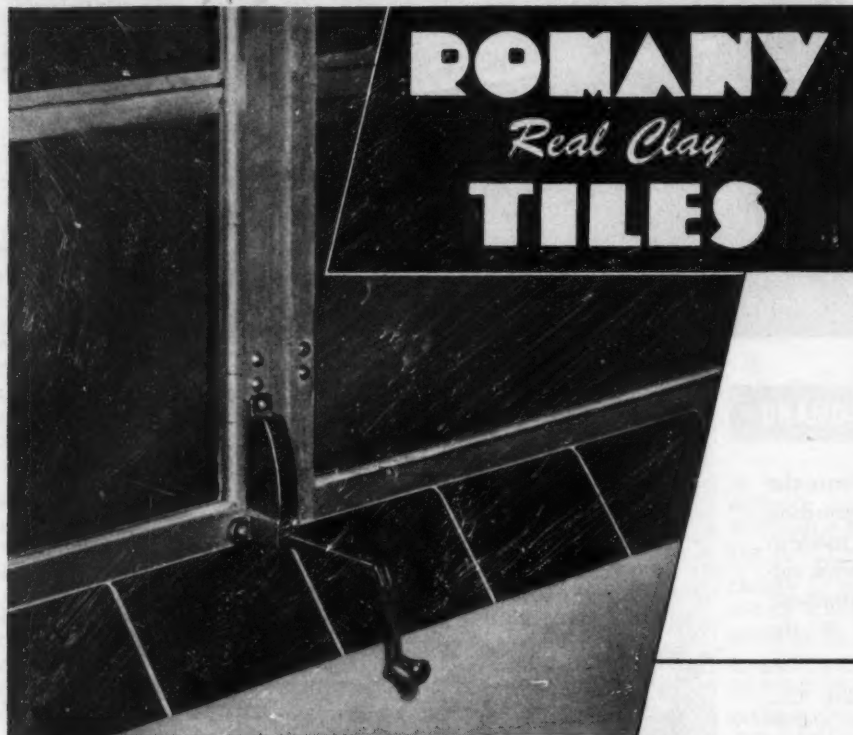
Hyman I. Kramer, Architect, 9 Edison Ave., Albany 8, N. Y.

Walter F. Rittenhouse, Architect, Vince and N. Jefferson Sts., Kittanning, Pa. (P.O. Box 350).

Harry Terry, Consulting Engineer, 110 E. 42nd St., New York 17, N. Y.

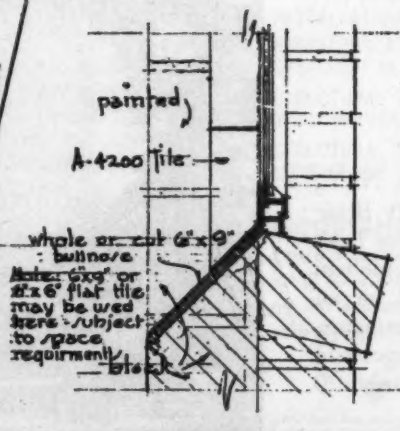
EDUCATION NOTES

New faculty members in the University of Illinois's Department of Architecture include Dr. Chu-Kai Wang, professor of architectural engineering; Linwood J. Brightbill, associate professor of architectural engineering; and Andrew Verkade, instructor in architecture. . . . Prof. Harold O. Bolz has joined the faculty of The Ohio State University as Associate Dean of the College of Engineering. . . . Competition for the \$5000 Lloyd Warren Scholarship, granted for travel and study abroad, is open to all U. S. architectural students; applications to participate must be submitted by Jan. 7, 1955, to the Beaux-Arts Institute of Design, 115 E. 40th St., New York 16. . . . Two new members on the design faculty of Virginia Polytechnic Institute's Department of Architecture are Professors Kurt K. Perls and Herschel A. Elarth. . . . New York University's College of Engineering has appointed Dr. James Michalos chairman of the department of civil engineering. . . . The new Dean of Engineering at North Dakota Agricultural College is Frank C. Mirgain, formerly at Cooper Union. . . . J. Sterling Crandall, senior in the University of Michigan College of Architecture and Design, has been awarded the \$1000 Harley, Ellington and Day Scholarship. . . . The College of Architecture of the University of California at Berkeley has acquired five new faculty members: lecturers Jorge Arango, Theodore C. Bernardi, Carl G. Kolbeck and James M. Leefe and instructor Vincent M. Milone. . . . New appointments to the Graduate School faculty of Pratt Institute School of Architecture include: Robert L. Davison, Philip C. Johnson, Morris Ketcham Jr., Frederick J. Kiesler and George Nelson.



SLOPING WINDOW SILL TILE

Especially in schools, there is a growing preference for sloping window sills where nothing can be collected—including dust. ROMANY 6"x9" bullnose or flat tile may be cut to perfectly connect window sill with wall surface below. Bullnose tile may be turned into the plaster or wall surface, or into the window. ROMANY A-4200 cap is of real assistance for both jambs. These units are available in all Buff Body colors.



Every Architect should have our Sample Tile Chart No. 6. It's free.

UNITED STATES QUARRY TILE CO

Member: Tile Council of America and Producers' Council, Inc.

217-H FOURTH ST., N.E., CANTON 2, OHIO

ADDENDA

In its November 1954 report on the Herald Tribune Fresh Air Fund camp (p. 156), the RECORD omitted credit to Julian H. Salomon, camp consultant and planner of Suffern, New York.

For the article "Principles of Design in Buildings for the Aged" (ARCHITECTURAL RECORD, September 1954, pp. 198-199), the RECORD should have acknowledged as a source "Some Principles of Dwelling Design for Aged Persons," a study by Herbert S. Heavenrich Jr. of articles published in numerous periodicals, notably British.

(More news on page 280)



*Beautifully proportioned
De Luxe BUDGETLITE
is the closest fixture
in its price class
to natural lighting,
and meets
the American School
Lighting Standards.*

EVERY PART of fluorescent fixture design was reexamined, reconsidered and simplified to provide substantial savings as well as contemporary good looks . . . Streamlining is so utilized the cost is low, installation is economical and maintenance is virtually reduced to feather-duster cleaning and replacement of long-life lamps . . . Write Ainsworth — one of the oldest and most respected names in lighting.

Ainsworth Lighting Inc.

38-12 29th Street
Long Island City 1, N. Y.

You are specifying
RELIABILITY
when you
select **SIGNAL** products



Fire Alarm Systems
(Interior & Exterior)



Signal Devices



Code Call Systems

Write for Catalog FSC-7

You can expect complete reliability from products engineered and manufactured by Signal Engineering & Mfg. Company, originators of A-C Fire Alarm Systems and the Underdome Bell. Some of the SIGNAL products of special interest to the building industry are:

- ★ Interior Fire Alarm Systems (coded and non-coded types) complete with wall boxes, control panels and signal devices,
- ★ Single-stroke and vibrating bells in various sizes; chimes, cow bells and horns
- ★ Code Call Systems for instant communication with individuals away from desks or benches.

Engineering
Representatives
in Principal Cities.



PLANNING A HOSPITAL?

THIS FREE
BOOKLET
WILL PROVE
VALUABLE
TO YOU



To all architects planning a hospital, Aloe Equipment Layout and Planning Service provides assistance in preparing layouts and detailed information concerning fixed equipment exclusively related to hospitals; i.e., cabinets and casework, sterilizers, operating lights, x-ray view boxes, central suction systems, etc.

A. S. Aloe Company AND SUBSIDIARIES
1831 Olive St., St. Louis 3, Mo.

Send your Free Brochure:
Hospital Equipment and Planning Service.

mail
today

Name _____

City _____

State _____

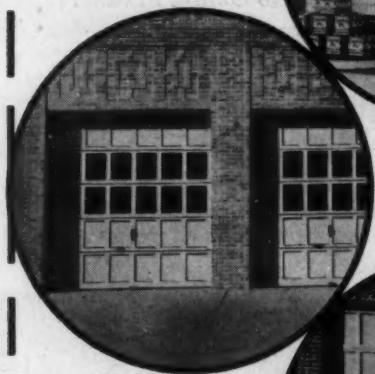


**RAYNOR
DOORS**

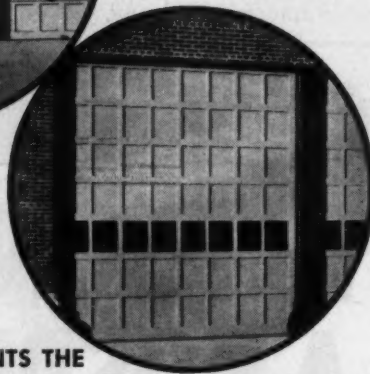
**RAYNOR
DOORS**



**RAYNOR
DOORS**



**RAYNOR
DOORS**



GIVE YOUR CLIENTS THE

Top Door Quality

YOU DESIRE AND THEY DESERVE

Whether you are specifying a Raynor door for a truck terminal, service station, warehouse or home, the completeness of the Raynor line of wood sectional overhead doors, is your assurance that the door is designed and built to fit the opening.

The smooth operation and complete weather protection accomplished by Raynor exclusive Graduated Seal is further assurance to you and your client of lasting door satisfaction.

Check the telephone directory or write direct for the name of your nearest Raynor representative.

RAYNOR

MANUFACTURING COMPANY, DIXON, ILL.

Builders of a Complete Line of Wood Sectional Overhead Doors



Box No. 5860

We are furnishing Mail Chute Equipment for many college buildings — Dormitories, Laboratories, Hospitals, Museums, Office and Administration Units.

The University of Michigan has ten Cutler Installations.

ESTABLISHED 1893
Cutler Mail Chute Co.
ROCHESTER 7, N. Y.

FOR YOUR PROTECTION

insist on



Quality Approved
ALUMINUM
DOUBLE-HUNG CASEMENT PROJECTED AWNING
WINDOWS

Lower maintenance costs, no painting, easy operation, years of trouble-free service . . . these are a few of the benefits your clients get with "Quality-Approved" aluminum windows . . . windows that have been tested for quality, strength, construction and minimum air infiltration.

For detailed specifications and names of manufacturers, consult Sweet's 17a/ALU or write direct to

ALUMINUM WINDOW MANUFACTURERS ASSOCIATION
74 Trinity Place, New York 6, N. Y.

If

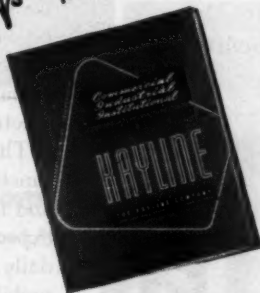


your time is valuable

Send for a copy for yourself and your specifications writer today. Use a post card or simply attach this advertisement to your letterhead. The Kayline 74 page Catalog No. 53 contains charts and information on footcandles of light, light patterns, installation suggestions and other valuable information to make your job easier. Send for it today!

THE KAYLINE COMPANY
2480 EAST 22nd STREET
CLEVELAND 15, OHIO
the one source lighting line
Since 1895

You need data on lighting problems that is complete, yet concise and easy to use. Kayline's Catalog No. 53 will save you valuable time on specifying the lighting for all commercial and industrial jobs you do.



'TV' WIRING DEVICES for homes, hotels, apartments, schools, etc.



MOSLEY TV Lead-in Wall Socket harmonizes with all electrical wall plates. Supplied with Mating Plug and attractive brown or ivory face plate. Cat. No. F-1PK, List Price, only \$1.95.

MOSLEY TV Wiring Materials are available at Radio and Television Parts Distributors — coast-to-coast. Write for name of nearest supplier, Free Catalog and booklet "How Builders Fit Into The TV Picture".

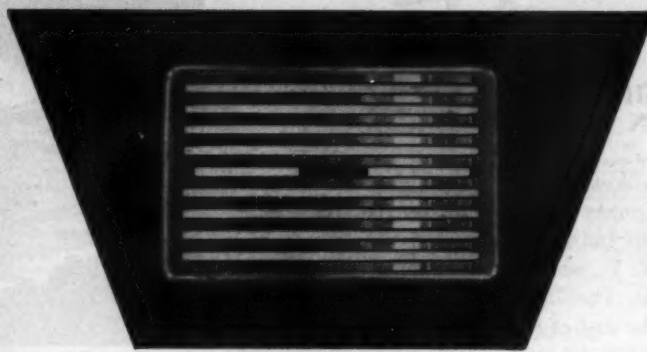
MOSLEY ELECTRONICS, Inc.
8622 St. Charles Rock Rd., St. Louis 14, Missouri

WALL SOCKETS, PLUGS, CONDUIT, ENTRANCES, SWITCHES, COUPLERS.

Maximum built-in convenience at minimum cost is supplied through use of MOSLEY TV Wiring Materials.

MOSLEY products are "TV Engineered" for dependable performance. They have been the choice of expert Installation Technicians—for years!

FOR CEILING VENTILATION



INSIST ON THE DEPENDABLE

Trade-Wind

STILL THE ONLY KITCHEN VENTILATOR GIVING YOU ALL THESE FEATURES:



DISTINCTIVE DRIPLESS RECTANGULAR GRILLE
Stays clean longer — more attractive



GENUINE CENTRIFUGAL BLOWERS
Greater performance under toughest conditions



ISOLATED MOTOR
Keeps cool and clean indefinitely



5 YEAR GUARANTEE
Proven dependability assures longest life

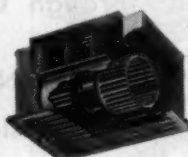


INTERCHANGEABLE DISCHARGE
For easy vertical or horizontal exhaust



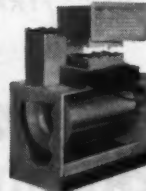
22 YEARS PIONEERING EXPERIENCE — Trade-Wind has greatest design and manufacturing know-how

CEILING MODELS



425 CFM
300 CFM
100 CFM

CABINET MODELS



For over-the-stove cabinet installation

NEW AXIAL FLOW



300 CFM for wall or ceiling

Trade-Wind Motorfans, Inc.

7755 PARAMOUNT BLVD., DEPT. AR, RIVERA, CALIFORNIA

THE RECORD REPORTS

(Continued from page 276)

SHOPPING CENTER OPENS IN WESTCHESTER COUNTY

Westchester County's new Cross County Center, built on the site of an old Indian trading post near Yonkers, N. Y., was recently opened to the public. The 70-acre center was erected at the cost of \$30 million.



Major buildings in the center include branch department stores for Gimbel Brothers and John Wanamaker's. Occupying a central position is the Cross County Medical Center, an eight-story blue glazed-brick building. The top four floors of this building will eventually contain a 125-bed hospital, and the other floors will be assigned to professional offices. No service buildings were erected on the site.

The center, which is located at the junction of the Cross County Parkway and the new New York State Thruway, expects a total of 25-30,000 shoppers daily. Parking space for 5140 automobiles has been provided.

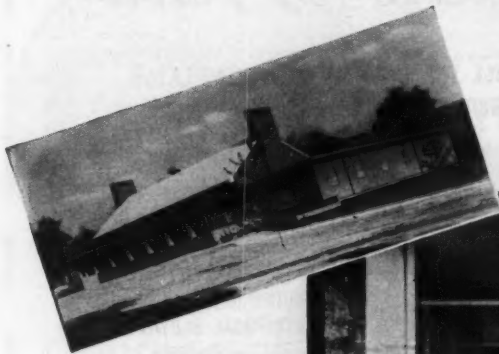
Architect Lathrop Douglass designed the shopping center for owner Sol G. Atlas.

VANDERBILT *University*

NASHVILLE, TENN.

ARCHITECTS

Warfield & Associates



16 Balanced Door Units in the dining hall of Vanderbilt U.



The Door that lets
TRAFFIC through QUICKLY

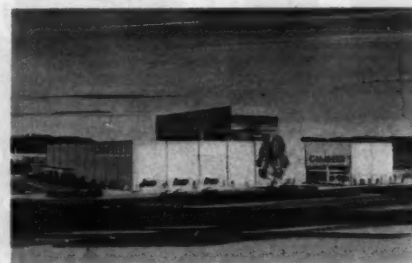


Ellison
the BALANCED DOOR

ELLISON BRONZE CO.

Jamestown, New York

representatives in 73 principal cities
in the United States and Canada



Above: architect's perspective of the Gimbel Brothers store at Cross County Center. Below: John Wanamaker's store, currently under construction



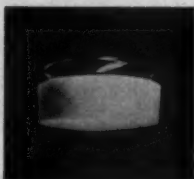
(More news on page 282)

**Incandescent lighting equipment
for your complete
installation requirements**

- concentric rings for classrooms
- gymnasium lighting
- corridor lighting
- cafeteria lighting
- dormitory lighting
- special lighting instruments
fabricated to your specifications



catalogs on request



belmar lighting company
57 Broadway Avenue, Englewood, New Jersey

► See Sweet's Catalog for complete information on **Steeltex Lath**

for stucco, masonry
veneer, plaster and
concrete floors

Pittsburgh Steel Products Company

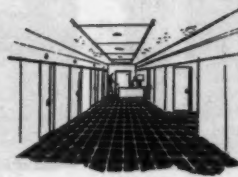
a subsidiary of

Pittsburgh Steel Company

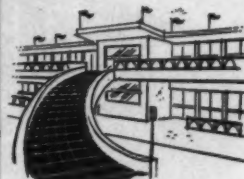
Grant Building

Pittsburgh 30, Pa.

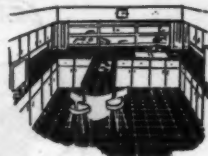
SUMMITVILLE Quarry Tile...



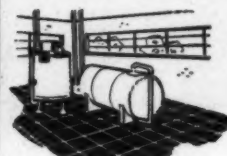
INSTITUTIONS



PUBLIC AND
COMMERCIAL BUILDINGS



HOMES



FOOD PROCESSORS AND
INDUSTRIAL PLANTS

BEST OF ALL FOR FLOOR OR WALL

■ Summitville Quarry Tile is unsurpassed for durability and beauty.

Famous Summitville "Reds" are better for floors and wainscoting. They are fireproof, frostproof, acid-resistant, scratchproof and fadeproof. Summitville Quarry Tiles are created for abuse and, once properly installed, are maintenance-free for life.

These are just some of the reasons why more and more architects, engineers and sanitation experts are specifying Summitville, so when you specify Quarry Tile, make sure it's Summitville! Full information is yours for the asking.



NEW DATA FILE

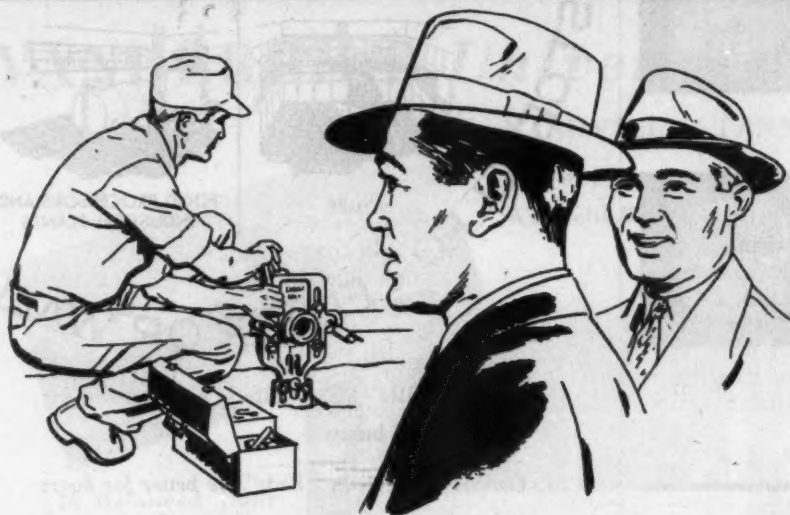
This beautifully bound book contains full information; sizes, colors and typical installation photos. Request on your letterhead.



SUMMITVILLE, OHIO

THE RECORD REPORTS

(Continued from page 280)



"You should give the architect a cigar, Boss!" those **PLUMB-EASY CARRIERS** are a cinch to install

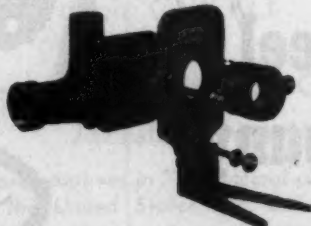
"Yes, Plumb-Easy Carriers live up to their name, by being easier to install, and easier to adjust."

Typical of how Plumb-Easy Carriers are designed for easy installation and adjustment is the exclusive SMITH method of attaching the face plate with fixed position bolts which saves time and labor."

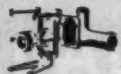
Another Plumb-Easy exclusive is the

adjustable coupling which allows final adjustment to be made at the face of the finished wall, and permits a perfect connection to the bowl every time. These are only two of many reasons why SMITH Carriers have earned the name Plumb-Easy and why you will want to specify SMITH on every job.

For complete information on Plumb-Easy Carriers, write today.



CHAIR CARRIERS



DRAINS



INTERCEPTORS



THIS BUILDING COMBINES METAL PANELS AND BRICK

A new office building for 500 employees of United Air Lines adjoining the company's executive headquarters in Chicago combines glass and porcelain enameled steel panels with brick cavity wall construction (main entrance above). North (at left above) and south façades are entirely of panel construction; south wall has heat-absorbent glass, blue-tinted to soften sun glare. Exposed steel columns are painted white to make them part of the over-all color scheme of red, white and blue (official colors of United). Penthouse contains equipment for complete air conditioning of sealed building, which has no openings except doors; roof flooding in summer is planned to ease demands on air conditioning system. The building provides 58,000 sq ft of floor area; all partitions are demountable. A "low brightness" lighting system produces shadowless light of 50 foot-candles at desk level. Architects of the building were Skidmore, Owings and Merrill.



Top of page: (right) main entrance; (left) north façade, like south, is all glass and porcelain-enameled steel construction. Above: reception area

(More news on page 284)

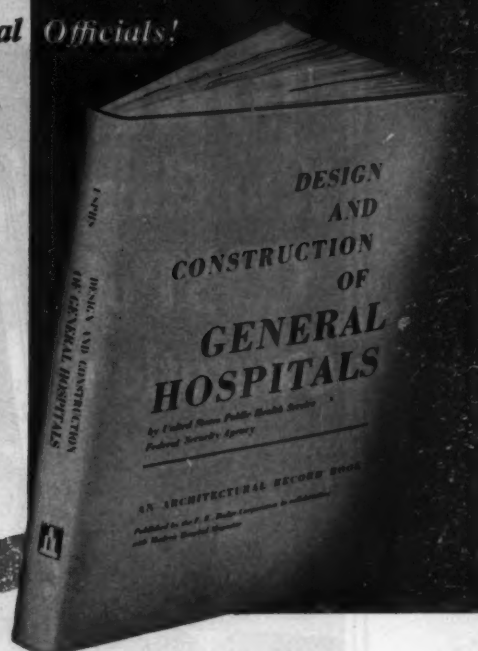
Enthusiastic Praise from Architects, Physicians, and Hospital Officials!

DESIGN and CONSTRUCTION OF GENERAL HOSPITALS

A collaborative publishing effort of...

- ARCHITECTURAL RECORD
- THE MODERN HOSPITAL

presenting the research findings of The United States Public Health Service



Recognized everywhere as the standard reference work on hospital planning, this book has won the highest praise from prominent figures in the field of architecture, medicine, and hospital administration. Based upon an extensive research study conducted by the Division of Hospital Facilities, U. S. Public Health Service, it analyzes and interprets the vast changes in hospital design brought about by rapid progress in medical science—notably in the new diagnostic, surgical, and therapeutic techniques which require equipment and facilities unknown a few years ago.

Published here, for the first time in any book, are the momentous research findings of the U. S. Public Health Service

214 pages

8 3/4 x 11 1/2

Renderings, Drawings, Diagrams,

\$12.00

which are today serving as blueprints for truly modern general hospitals. Enlisted in this research project were the skills and experience of experts in the fields of architecture, engineering, medicine, hospital administration, nursing, and dietetics. As a result, this book provides to all who plan and build hospitals the same high quality of technical and consultative assistance that the Public Health Service renders in all of its programs to build the nation's health. The material, collected and organized by the editorial staffs of two outstanding professional journals—THE MODERN HOSPITAL and ARCHITECTURAL RECORD—makes by far the most authoritative volume on this all-important subject in print today.

unexcelled as guides to careful planning"

"Hospital authorities and their professional associates have, in fact, been waiting many years for such a book. The composite author groups have packed a great deal into 214 pages and have given us as much of perfection as we can expect in such a fluid area of planning as hospital construction...none of the principles or practices which are recorded here may be considered as final, but they are unexcelled as guides to careful planning..."

E. M. BLUESTONE, M. D., *American Journal of Public Health*

rational approach...logical arrangement"

"Recognition is due Marshall Shaffer and others for the excellence of the work, for its rational approach to hospital planning and construction, and the logical arrangement of subject matter, the completeness and comprehension of each step...where other works describe mainly the principles basic to hospital planning and construction, this one translates the principles into schematic drawings and illustrates how they can be carried out in hospitals as small as eight beds (nursing units or community clinics) and as large as 800 beds. Even more it provides detailed equipment lists and recent cost figures..."

MALCOLM T. MACEachern, M. D., *The Modern Hospital*

encyclopedia in make-up"

"...The thoroughness with which this study has been carried out compels one...to classify it as a sort of dictionary or directory, veritably encyclopedic in make-up. One of its best features is its organization..."

ADDISON ERDMAN, A. I. A.
Journal of the American Institute of Architects

reference and guide"

"Although the perfect hospital has never been constructed and probably never will be, the use of this volume as a reference and guide will prevent many of the errors that show up after completion..."

Journal of the American Medical Assn.

practical handbook"

"It contains an invaluable collection of data and material on the subject of hospitals, and constitutes a practical handbook from which future planning may be based..."

LAURENCE P. JOHNSTON, A. I. A., *Hospitals*

SECTIONS PARTIAL CONTENTS

I. SCHEMATIC PLANS OF GENERAL HOSPITALS

30 separate "pilot plans" for hospitals of various sizes, from 20-bed to 400-bed buildings

II. PLANNING THE STRUCTURE

- A. Site Selection
 - Accessibility
 - Public Utilities
 - Nuisance Problems
 - Orientation & Exposure
 - Costs
 - Dimensions
 - Topography
 - Landscaping
- B. The Building
 - General Considerations
 - Traffic: Exterior
 - Traffic: Interior
- C. Circulation Spaces
 - Corridors
 - Stairways
 - Elevators

III. ELEMENTS OF THE GENERAL HOSPITAL

- A. Main Lobby
 - Information & Switchboard
 - Admitting Office
 - Business Office
 - Administrator's Office
 - Medical Service Office
 - Director of Nurses' Office
 - Medical Record Room
 - Library & Conference Room
 - Staff Lounge & Locker Room

- Gift Shop
- Personal Toilets
- B. Nursing Facilities
 - Patient Areas
 - Two-bed Rooms
 - Four-bed Rooms
 - Isolation Units
 - Psychiatric Room
 - Treatment Room
 - Nurses' Station
 - Consultation Room
 - Utility Room
 - Floor Pantry
- C. Surgical Facilities
 - Operating Rooms
 - Sub-sterile Rooms
 - Scrub-up Facilities
 - Clean-up Room
 - Anesthesia Equipment Room
 - Cystoscopic Room
 - Fracture Room (Orthopedic)
 - Laboratory
 - Darkroom
 - Instrument Room
 - Surgical Supervisor's Office
 - Doctors' Locker Room
 - Nurses' Locker Room
 - Closets
 - Corridor
 - Central Supply Facilities
- D. Obstetrical Facilities
 - Delivery Rooms
 - Treatment Rooms
 - Supply Closet
 - Labor Rooms

IV. EQUIPMENT AND SUPPLY LISTS

10-day Free Examination Privilege

Dodge Books
119 West 40th Street, New York 18, N. Y.

Please send me for 10 days FREE EXAMINATION a copy of "Design and Construction of General Hospitals." Within 10 days I will either send payment for \$12.00, plus postage, or return the book without obligation.

NAME.....

ADDRESS.....

CITY..... ZONE..... STATE.....

Save Postage: If payment accompanies this order, we pay all handling and postage charges. Same return privilege.

**LOWER
Your Clients'
COST of
Operation**

SPECIFY

BLAKESLEE

KITCHEN MACHINES
DISHWASHERS
GLASS WASHERS
PEELERS-MIXERS
ACCESSORIES

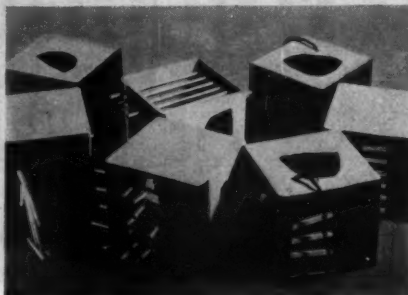


**SEND FOR FREE
COMPLETE CATALOG OF
SPECIFICATIONS · PRICES ·
AND ENGINEERING DATA**

G. S. BLAKESLEE & CO.
1844 S. LARAMIE AVE., CHICAGO, 50
NEW YORK TORONTO

THE RECORD REPORTS

(Continued from page 282)



"Fantastic Village" won the \$1000 first prize for painter Virginia Dortch Dorazio; jury remarked "poetic conception" of design for concrete playhouses using standardized panels of white, black and terra cotta

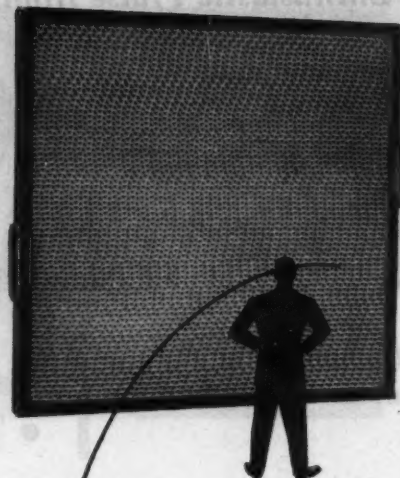
PLAYGROUND EQUIPMENT COMPETES AS SCULPTURE

A national competition to encourage the design of "play sculpture" — playground equipment to "stimulate children's imagination" — was sponsored last summer by *Parents' Magazine*, the Museum of Modern Art and Creative Playthings, Inc.; Creative Playthings has produced the three top winners (see cuts above and below).

Honorable mentions, each for \$100, were awarded to Dean Latourell, Julia Pearl and Joseph A. Maxwell Jr.



Above: "Stalagmite Cave" entered by industrial designer Robert J. Gar-giule got second prize of \$500; below: "Tunnel Maze" designed by Sidney Gordin, only sculptor in list of honors, won \$200 third prize



**You're really
looking at
9
air filters!**

- 1 Type 68 — 2" — finer mesh media and tighter pack for higher efficiency on smaller particles.
- 2 Type 44-68 — 4" — double packed for special applications requiring highest efficiency.
- 3 Type 44 — 1" — gable crimped for high efficiency; for ventilation, package air conditioners, furnaces, etc.
- 4 Type 44 — 2" — general ventilation for dirt, lint, paint, grease, oil, etc.
- 5 Type 44 — 4" — for greater dirt holding capacity.
- 6 Type MZ — 2" — zinc chromate painted before and after assembly; hot dipped galvanized frame; marine ventilation application.
- 7 Type MZ — 4" — same except 4" thick.
- 8 Type C4C4 — 2" — all copper media and frame; for corrosion resistant water eliminators, etc.
- 9 Type C4C4 — 4" — same except 4" thick.

Except as noted, filters are made of zinc electroplated herringbone-crimp steel screen media in sturdy steel frames. Other materials are aluminum, stainless steel and monel. Available in all sizes.

Because one filter won't do every air cleaning job, Farr Company has nine standard types designed to handle practically any dirt condition. Each embodies the famous herringbone-crimp media design and other Far-Air quality features, but differs in materials, thickness, etc. The efficiency of your air handling system is dependent on the filters used. Be sure you install the right type.

Send for complete catalog of FAR-AIR products to Farr Co., P.O. Box 45187, Airport Station, Los Angeles 45, Calif.

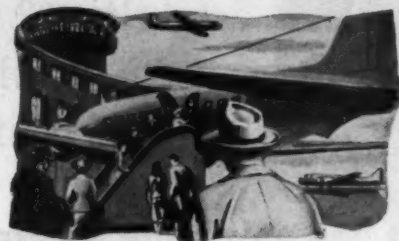
ORIGINATORS OF FAR-AIR CERTIFIED FILTER SERVICE



Manufactured under license by Farr Company
Manufacturing Ltd., Montreal, Canada

KOHLER Electric Plants

provide stand-by protection—
increasingly important in
building specifications



Model 30RB1
30 kw., 120/208 volt AC.
Remote starting.



Growing use of electrical equipment in modern living increases the need for stand-by electricity when central station power is cut off. Kohler Electric Plants insure automatic protection *before the emergency*.

Airports, hatcheries, greenhouses, hotels, motor courts, communication systems, refineries, bakeries, sewage treatment and filtration plants, filling stations, use Kohler stand-by plants to prevent costly interruptions. In hospitals they maintain nurses' call bells, operating room and exit lights, elevators, baby incubators, X-rays, iron lungs, sterilizers. Schools, stores, theatres, use them to prevent sudden darkness. Sizes 1000 watts to 30 kw. Write for folder A-3.

Kohler Co., Kohler, Wisconsin. Established 1873

KOHLER OF KOHLER

PLUMBING FIXTURES • HEATING EQUIPMENT • ELECTRIC PLANTS
AIR-COOLED ENGINES • PRECISION CONTROLS

BUY LIGHTING—NOT FIXTURES...

INVEST
IN
AMERICA'S
FINEST
FLUORESCENT
LIGHTING



Write for catalog
showing complete
line of commercial
and industrial units.

Smithcraft
LIGHTING DIVISION
CHELSEA 50, MASSACHUSETTS

Mr. Architect: this
is important to you!

W. J. HAERTEL & CO.

now offers 8 Quality Mechanical Suspension Systems, for the erection of acoustical tile, to the Building Industry. Each system has distinct and individual advantages, all are fabricated of rust-resistant steel and engineered to produce a lasting true and level ceiling.

Write today for our complete line of NEW brochures containing technical information.

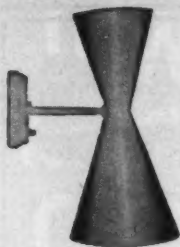
W. J. HAERTEL & CO.

832 W. Eastman St., Chicago 22, Ill.

Please send me, without obligation, your complete line of new brochures.

Name _____
Company _____
Address _____
City _____ Zone _____ State _____

Securitee
SYSTEMS



up and down and all around...



Just a phone call to one of Century's strategically located offices brings you expert consultation on any phase of lighting.

Century's knowledgeable engineers run ready to assist the architect, engineer, designer or decorator. They're full of engineering facts.

Century Lighting, Inc.
521 West 43rd Street
New York 36, N. Y.

1820-40 Berkeley Street
Santa Monica, Calif.

Reuben E. Lagerstrom
2739 10th Avenue
Oakland 6, California

Gregg N. Cloos
978 Garfield
Denver, Colorado

Ken H. Hill
P.O. Box 217
Mount Dora, Florida

Earl G. Koehler
Room 1279 Merchandise Mart
Chicago 64, Illinois

Richard B. Murdoch
4616 Harvard Road
College Park, Maryland

Fred Vorlander
80 Boylston Street
Boston, Massachusetts

K. Dale Rhodes
15021 E. Warren Avenue
Detroit, Michigan

Otto H. Rottmann
1023 No. Grand Blvd.
St. Louis, Missouri

Philip H. Rynn
Elwood Hotel
First & Carson Streets
Las Vegas, Nevada

A. G. Muller
P.O. Box 952
Greensboro, North Carolina

Thomas A. Marshall
327 Compton Hills Drive
Cincinnati, Ohio

Gordon F. Stofer & Bro.
707 St. Clair Avenue, N.E.
Cleveland, Ohio

Paul F. Kyack
10 S. 18th Street
Philadelphia, Pennsylvania

P. A. Michler
2807 Allen Street
Dallas 4, Texas

Barney Winkler
776 A AM & M Bldg.
Houston, Texas

Lynn H. Morris
Box 349
Salem, Virginia

Al. C. Slater
Al C. Slater Assoc.
9011-15th Avenue N.E.
Seattle, Washington



FROM A *corner*
drugstore...

TO A *modern*
skyscraper

you can depend on
Worthington air conditioning
and refrigeration

The Worthington line of air conditioning and refrigeration equipment ranges from 3-ton package units to giant central station systems. There's a type and size for any job.

Write Worthington Corporation,
Air Conditioning and Refrigeration
Division, Harrison, N.J. A.4.45



WORTHINGTON



Climate Engineers to Industry, Business and the Home

ARCHITECTS...

Get this
free booklet
filled with ideas
for **MODERN**
WASHROOMS



This booklet contains color photographs of many actual American-Olean Tile installations that provide easy sanitation, low maintenance costs, and long life. In it you will find many useful ideas showing how tile can be used to advantage in washrooms and in other areas in industrial buildings. Write for your free copy today.

Please send my free copy of Booklet 300.

Name

Title

Address

City Zone State

American-Olean Tile Company

1036 Kenilworth Ave., Lansdale, Pennsylvania
Member, Tile Council of America

Checker HAT AND COAT RACKS



No. 25 portable
5 ft. against-wall
rack holds 25
coats and hats



No. 50
This 5 ft. portable
rack holds 50 coats
and hats

CHECKROOM EFFICIENCY ANYWHERE

Keep coats and hats out in the open, aired, dry and in press—each coat on a wooden hanger held spaced apart from every other; each hat in its individualized space on a ventilated shelf. Save floor space—accommodate 5 people per square foot. Rigidly built for lifetime service—welded heavy gauge and square tubular furniture steel. Beautifully finished baked-on enamel. Portable units come on large swivel casters. Checker Wall Racks are also available in any length by the foot—fit in anywhere. Mount on wall at any height—standard equipment in modern schools, etc. where they keep clothes in a safe, sanitary, orderly manner.

Write for Bulletin CK-52

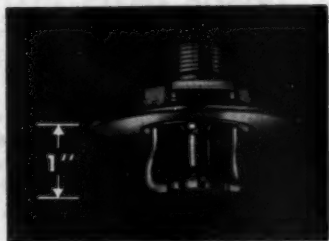
VOGEL-PETERSON CO.

"The Checkroom People"

1121 West 37th Street

Chicago 9, U.S.A.

The BEAUTY of Grinnell *Flush-Type* Ceiling Sprinklers



By planning your fire protection in the blueprint stage, you not only get the most efficient protection, but a system that *harmonizes* with interiors.

Because the Grinnell Ceiling Sprinkler protrudes only 1 inch below the ceiling and is available in a variety of finishes and colors, it is the ideal sprinkler for offices, shops, stores, restaurants, lounges, country clubs. It gives reliable, unobtrusive fire protection.

Grinnell Company, Inc., Providence, Rhode Island—manufacturing, engineering and installation of automatic sprinklers since 1878.

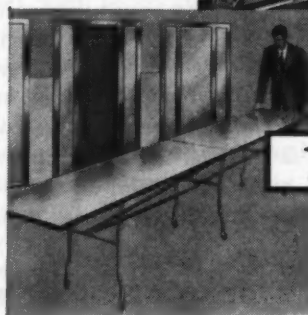


GRINNELL
FIRE PROTECTION SYSTEMS

Refer to Sweet's
Architectural
File Section
22i/sc

Schools can be built for less, using Schieber Tables and Benches

In-wall



Port-a-Fold

Mobil-Fold
Folding tables and
benches also avail-
able in mobile
truck assembly.

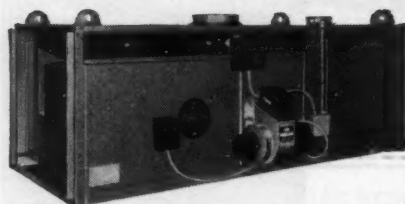
750 architects have met the limited school building budget problem by eliminating a single purpose room from their plans and equipping corridors and activities areas to serve double duty as lunchrooms. This can be done safely with Schieber equipment which has stood the test of time. The first installation made 18 years ago is still in daily use.

Schieber
SALES COMPANY

Write for additional
information
and prices

Detroit 39, Michigan

A SERVICE STATION MASTERPIECE



The recent trend to standardized two-bay service stations by major oil companies has created the need for a specially designed heating system. That's why J-C engineered and is now introducing the OL-245-S19.

Its 196,000 Btu output matches exactly the need of this new station type and assures comfortable temperatures under the most severe weather conditions. All J-C suspension furnaces . . . ranging from 80,000 to 1,000,000 Btu output . . . are engineered for easy installation.

J-C FURNACES ARE RECOGNIZED FOR THEIR QUALITY AND COMPETITIVE PRICE.

J-C . . . America's Largest and Most Complete Warm Air Heating Line!



JACKSON & CHURCH CO.

Saginaw, Michigan

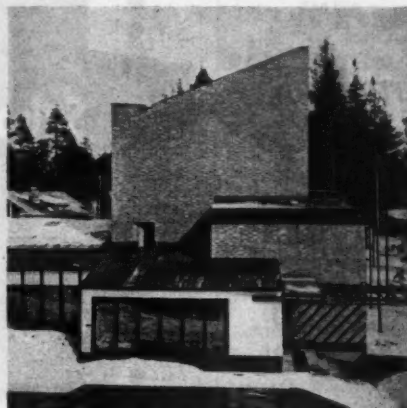
REQUIRED READING

(Continued from page 48)

GROPIUS continued from p. 48

Fuller were and are developing their own big ideas built on the foundations of the master's before — Sullivan, van de Velde, Perret, Peter Behrens. And it is significant that all of these men devote much of their life to working with the young students of today.

AALTO continued from p. 46



Photograph showing proportions of Town Hall, Helsinki, by Alvar Aalto

inspiration for Finnish architecture with the regional characteristics of the country influencing the building designs. Here, in particular, we see how the creativity of Alvar Aalto evolves from these influences and how his work is not only representative of Finland but in the last analysis transcends national boundaries. A power station designed by him demonstrates that the harsh climate demands large, simple forms; he adopts a widespread settlement form in his role as city planner, and in all respects relates his buildings to the Finnish way of life. And these buildings are, in turn, masterworks of modern architecture. It is pointed out to the reader that there is a freedom in Finland, unknown to many, in designing a group of buildings for a factory and its settlement, a Technical High School or a town to be created as an organic whole in the open forest. Aalto's extensive projects in virgin territory are expertly presented in this book and his various solutions to these large-scale problems are most edifying. As climate and economy demand elementary simplicity of detail, his sensitive yet bold expressions in wood, copper, brick and glass make the study of this unique book, dealing as it does with a most decisive period in Aalto's work, a most interesting one. Ruth Watson.

(Continued on page 292)

ONE COAT PLASTERING MADE EASY WITH PLASTER-WELD®

. . . the Remarkable, Versatile
JOB-PROVED BONDING AGENT



Midway Gardens Apts., Chicago. One of hundreds of successful Plaster-Weld installations. In this case, Plaster-Weld was used to permanently bond lime-putty coat directly to all concrete ceilings and columns. Archts.: Holabaird, Root & Burgee & Associates; Genl. Contr.: S. N. Nielsen Co.; Plng. Contr.: McNulty Brothers Company. Many other examples of Plaster-Weld applications gladly sent on request.

Plaster-Weld is the scientific resinous water-emulsion bonding agent which gives you a guaranteed method of permanently bonding Gypsum, Lime-Putty, Acoustical Plaster and Cements to themselves . . . or directly to any structurally sound surface including—

Concrete ceilings, beams, columns . . .
Plastered walls and ceilings . . . Stippled
or textured walls . . . Painted or un-
painted surfaces . . . Brick . . . Stone . . .
Wood . . . Glass . . . Block . . . Metal
. . . Slabs . . . Ceramic Tile

A PLASTER-WELD BOND NEVER LETS GO!

Plaster-Weld is applied with brush, roller, spray gun directly to most surfaces (old or new) without need for costly, time-consuming surface preparation. You cover with new material, as soon as touch dry (usually an hour) or several days later.

The bond you make is permanent, ageless . . . the bond itself is much stronger than the material being bonded. Equal bonding permanence all climates, all types of surfaces, all sorts of conditions.

You can specify Plaster-Weld with complete confidence . . . because a Plaster-Weld bond never lets go!

Building Supply dealers carry it . . . or address Larsen Products Corp., Box 5756-C, Bethesda, Md.

**Specify
TUFF-TEX
for floors
that get a
bang out of
production!**



The thump and vibration of heavy machines . . . the constant flow of plant traffic . . . calls for heavy-duty flooring like Tuff-Tex* Greaseproof Industrial Tile.

Lubricating oils, grease, metal chips can't hurt Tuff-Tex.

Available in many handsome colors, Tuff-Tex offers unusual versatility of design . . . both decorative and functional.

Send for Tuff-Tex folder or call in your Tile-Text* contractor, listed in the classified pages of your phone book.

THE TILE-TEX DIVISION, The Flintkote Company, 1234 McKinley Street, Chicago Heights, Illinois

Tile-Text—Pioneer Division, The Flintkote Company, P. O. Box 2218, Terminal Annex, Los Angeles 54, California

The Flintkote Company of Canada, Ltd., 30th Street, Long Branch, Toronto, Canada

*REG. U. S. PAT. OFF.



TUFF-TEX GREASEPROOF
INDUSTRIAL TILE

INCREASE ROOM FUNCTIONS



Abbott Hall, Northwestern University
James Gamble Rogers, Arch.

with **Fairhurst** Unitfold®
T.M. Reg.
FOLDING WALLS

This installation at Northwestern University illustrates the practical flexibility of space arrangement possible with a Unitfold Wall. Lounge and dining hall may be quickly separated by a rigid, sound-resistant wall that permits simultaneous use of each. For student dances or meetings the wall units fold out of the way to allow clear access between rooms. Used almost daily since 1938; no maintenance required. There is no need for expensive mechanical equipment with Unitfold—all installations are easily operated by one man regardless of size or number of units. Write us.

Photo above shows: center—units partially closed; right—units folded and stacked.

John T. Fairhurst Co., Inc.

45 West 45th Street

New York 36, N. Y.



...modern design demands
MARMET—ALUMINUM
Ribbon Windows

- Striking Appearance
- Precision Built
- Simply Designed
- Sturdy Construction
- Alumilited Finish
- Satinized Finish

MARMET Extruded Aluminum Ribbon Windows, both Series 200 and 300, are constructed of a continuous head and sill that forms a packaged unit divided by slimline mullions between the sash and with an integral jamb member at the end. Frame and sash members are welded at corners . . . all individual sash provided with a minimum of two weather contacts to the frame.

MARMET Series 200 and 300 Ribbon Windows are constructed with extruded aluminum sections, aluminum alloy No. 6063-T5 (63S-T5), having a tensile strength of not less than 27,000 lbs. per square inch.

Write for new catalog 55-2 showing complete specifications

MARMET ALSO MANUFACTURES

- Church Windows • Projected Sash 400 • Projected Sash 500 • Curtain Wall • Stock Size Ribbon Windows • Glass Block Ventilators • Wall of Windows

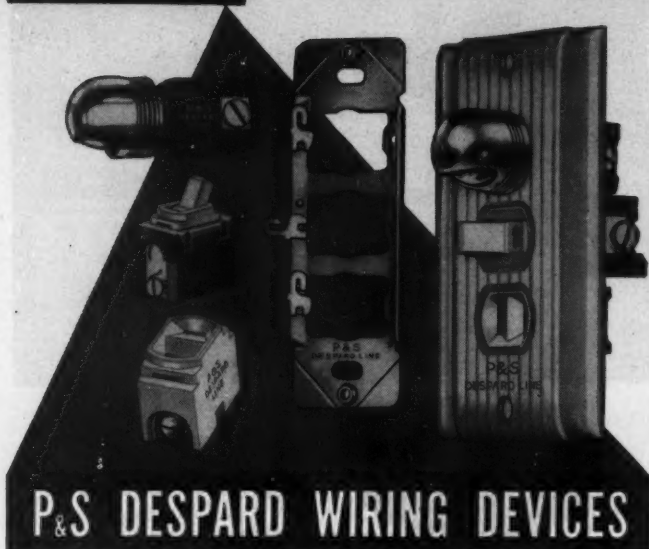
MARMET CORPORATION

of

WAUSAU, WISCONSIN



SPECIFY modern wiring



P&S DESPARD WIRING DEVICES

THE ORIGINAL INTERCHANGEABLE LINE
for homes, institutions, public buildings,
industrial and commercial buildings.

Better four ways

- ① **CONVENIENCE**—You can specify smartly styled combinations of switches, outlets and pilots to meet practically any situation. The electrical contractor can assemble them right on the job without an unwieldy inventory of factory-assembled combinations and long waits for special plates.
- ② **INEXPENSIVE**—While the Despard Line is not built down to a price — it is economical. First quality devices — T-rated switches, double grip outlets — can be installed for only a few cents more, due to savings on multi-gang boxes and wall plates. Where low cost is the prime consideration use of residential type switches will give P&S Despard convenience and modern appearance at low cost.
- ③ **MODERN APPEARANCE**—Compact P&S Despard devices look different — and are different. The distinctive design permits a completely matched installation. Smartly styled, functional combinations have eye-appeal — yet, from a practical viewpoint, provide more convenience per dollar than any other line on the market. This compactness is of the utmost importance where multiple controls are necessary.
- ④ **QUALITY**—Thousands of installations throughout the country in all types of buildings are constant proof of the dependability of these precision-built devices. T-rated switches and double grip outlets meet Federal Specifications.

For information about the Despard Line® and other P&S® quality devices, just check squares and attach this ad to your letterhead.

- | | | |
|--|---------------------------------------|---|
| <input type="checkbox"/> P&S Despard Line | <input type="checkbox"/> P&S Turnlok® | <input type="checkbox"/> Polarized Line |
| <input type="checkbox"/> Weatherproof | <input type="checkbox"/> Surfex | <input type="checkbox"/> Switches & Outlets |
| <input type="checkbox"/> Uniline Wall Plates | | |

Mail to Dept. AR

Send for FREE 36 Page Booklet

Full of helpful
flooring information,
data on installation
and specifica-
tions. Interesting
illustrations ...
some in color
...show design
possibilities.

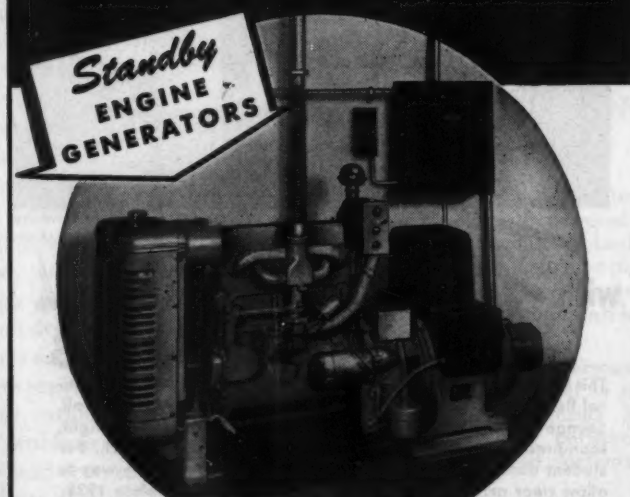


The Tile-Tex Division THE FLINTKOTE COMPANY

Dept. H, 1232 McKinley Ave., Chicago Heights, Illinois

WHEN WIRED POWER FAILS
DEPEND ON

READY-POWER



Well known Ready-Power Engine Generator Standby Units provide dependable electric power instantly when wired power fails. Continuation of vital services are assured during emergencies. Automatic or manually controlled units operate on gasoline, natural gas or Diesel fuel. 3KW to 100KW or larger. Write for literature.

The READY-POWER Co., 11231 Freud Ave., Detroit 14, Mich.

FOR BUILDINGS OF ALL TYPES

... first in efficiency, economy

and client satisfaction



TODD BURNERS

GAS OR OIL



COMBUSTION EQUIPMENT DIVISION
TODD SHIPYARDS CORPORATION

81-16 45th Avenue
Elmhurst 73, N. Y.

TODD

How can
this Door

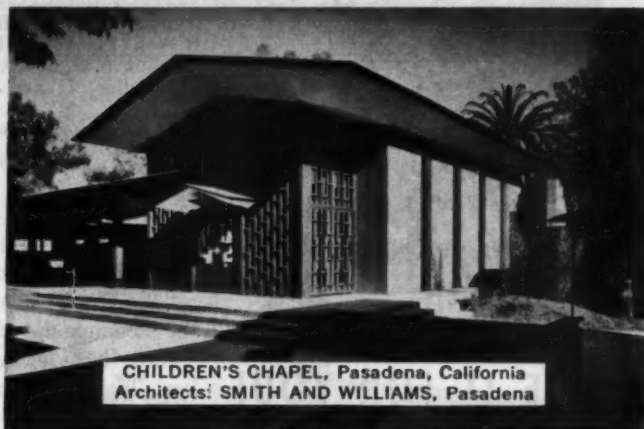
cut costs in
Commercial
Buildings?

The answer is simple: Curtis New Londoner hollow-core flush doors won't sag or warp because of their patented, locked-in all-wood cores. Here are doors that take the stress and strain of commercial use! Each door is a completely sealed unit—nothing to "float" or get out of place. Face panels in native woods come beautifully book-matched, or in other pleasing variations. For lasting owner satisfaction, use Curtis New Londoner doors. Also made in solid core construction—all sizes. Complete facts are yours for the asking.

**CURTIS
NEW LONDONER**
HOLLOW-CORE
FLUSH DOORS
CURTIS COMPANIES SERVICE BUREAU
Clinton, Iowa

specify... **Cabot's**

For distinctive beauty . . .



CHILDREN'S CHAPEL, Pasadena, California
Architects: SMITH AND WILLIAMS, Pasadena

and lasting protection

Cabot's CREOSOTE STAINS

Cabot's stains enhance the grain and texture of siding and shingles and add years to their life. The high content of creosote oil guards against decay and insects; due to careful refining these stains may be painted over later if desired.

Cabot's Creosote Stains will not crack, peel, or blister. Easy and economical to apply; cost less than half the price of good house paint; available in 18 modern colors ranging from rich reds, greens, and browns to soft weathering grays.

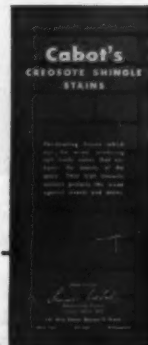
A quality product from Cabot Laboratories
...manufacturing chemists since 1877

Samuel Cabot

Request a color card and name of
nearest distributor in U.S. and Canada.

SAMUEL CABOT INC.

129 Oliver Bldg., Boston 9, Mass.



VENTILATING PROBLEM?

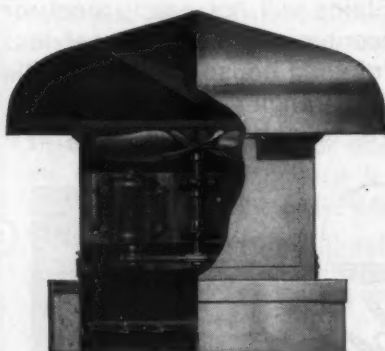


LET BURT ENGINEERS SOLVE IT FOR YOU!

Burt engineers are specialists in air movement. They should be—with over half a century of practical experience in designing, engineering and manufacturing ventilators for the alphabet—from atomic bomb plants to zoos. . . . After the slide rule, Burt has the invaluable asset of thousands of successful ventilator case histories to check and prove or disprove the paper work.

BURT'S LINE IS COMPLETE

Burt manufactures all types, all sizes of ventilators. Burt is not interested in selling a specific type because Burt makes them all. That's why Burt's unbiased recommendation is real assurance of satisfaction. Write for our general catalog.



FAN & GRAVITY VENTILATORS • LOUVERS
SHEET METAL SPECIALTIES

The Burt Mfg. Co.

48 East South Street
AKRON 11, OHIO

Member Power Fan Mfr's Ass'n

REQUIRED READING

(Continued from page 288)

MARSEILLES BLOCK

The Marseilles Block. By Le Corbusier; translated by Geoffrey Sainsbury. The Harvill Press (23 Lower Balgrave St., London, S.W. 1) 1954. 8½ in. by 11 in., 71 pp, illus., 21/net.

"Dispersion in housing is a negative trend," says Le Corbusier. "We need a positive principle — localization. . . . The Garden City? A myth, a parasitic growth neither city nor garden . . . A waste of land lost to Agriculture."

"We require a new statute to insure the economic use of land available."

And thus, he explains, defends and lauds his vertical garden city to scholar and doubter — condemning bitterly the "mudslingers."

Corbusier probes into questions of individual liberty, hygiene, family organization, gregariousness and the technical means of achieving comfort, before he draws his conclusions — before he builds.

The book is more than a description of the conception and construction of Unité d'Habitation de Marseille: it is Corbu's philosophy on the role of architecture (and of Le Corbusier) in the modern world — that of the centralization of people into social groups provided with air, light, sun, foliage, liberty, intimacy — "the well being of the family gathered around the fireside."

OTHER BOOKS

TV Stations. By Walter J. Duschinsky. Reinhold Publishing Co. (430 Park Ave., New York) 1954. 8½ in. by 11 in., 136 pp, illus., \$12.50.

A guide for architects, engineers and management dealing with the planning and design of television stations.

A History of the School of Architecture, Columbia University. By Theodor K. Rohdenburg. Columbia University Press (New York, N. Y.) 1954. 7 by 10 in., 114 pp, illus., \$2.50

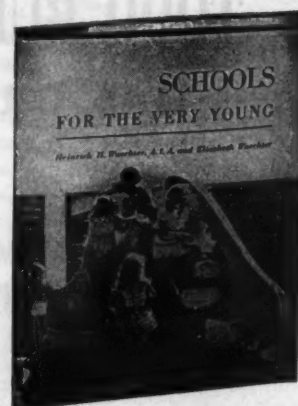
The history of a school that grew from an enrollment of two students, who had classes in quarters formerly belonging to the Deaf and Dumb Asylum, in 1881 to the present world renown school of 150 students.

A House Called Morveen — Its Role in American History, 1701-1954. By Alfred Hoyt Bill. Princeton University Press (Princeton, N. J.) 1954. 5½ by 9 in., 206 pp, illus., \$3.00

The history of an historic landmark that has housed many who have served their state and country with distinction.

Schools for the Very Young

by HEINRICH H. WAECHTER, A.I.A.
and ELISABETH WAECHTER



THOUGH many volumes have been written about school design, "Schools for the Very Young" is — so far as we know — the first in which an architect and a child educator have collaborated to provide an up-to-date treatise on the requirements of the particular type of school demanded for the proper training of the very young child.

Beginning with a brief yet adequate historical and philosophical background, in which the development of the theory and practice of child education is discussed, the book goes on to describe the pre-school in action, noting the events of the school day and the corresponding environmental needs of the children and their teachers. Examples of existing pre-schools are presented with critical comment. Detailed information is given concerning the space apportionments and arrangements called for by the activities peculiar to such institutions. Since one of the authors is especially concerned with city planning, the relation of the pre-school to its neighborhood and community is analyzed, and the many different types of pre-schools that have developed to meet special conditions are enumerated and explained.

The outdoor space and its proper equipment are thoroughly covered from the standpoint of a capable architect who has given much thought to the problem. Technological problems of construction, lighting, ventilation, mechanical equipment, etc., are scrutinized in the light of the most recent practice. A wealth of illustrations add both interest and information, and a selective bibliography will aid further study.

208 pages, 7½ x 10, stiff binding. Price \$6.50.

Book Department, F. W. Dodge Corp.
119 West 40th Street, New York 18, N. Y.

Enclosed is \$_____ for _____ copy(s) of
"Schools for the Very Young" by Heinrich H.
and Elisabeth Waechter at \$6.50 per copy.
(Add 20¢ for N.Y.C. delivery — \$6.70.)

Name _____

Address _____

City _____ Zone _____ State _____

USE THIS NEW SAFETY MATERIAL
ALL OVER
YOUR
PLANT

Work platforms



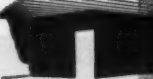
Flooring



Gutter covers



Partitions



Safety
GRIP-STRUT

Pat.
Pending

NON-SKID—RUGGED—LOW COST

Safety Grip-Strut is a new basic material. All one piece, steel or aluminum, in various sizes and gauges. Sold like lumber, used like lumber and stocked in your storeroom like lumber. Ideal for on-the-job fabricating. Not welded, riveted or expanded. It presents an open space, in a diamond shaped pattern, in excess of 75% of the area for ready access of light and air and gives a positive NON-SKID footing in all directions. Ideal for stair treads, fire escapes, cable trays, work platforms, catwalks, flooring and for original equipment safety treads. Your own mechanics can install it—it's inexpensive, yet permanent and safe.

Write today for new catalog showing loadings and methods of easy application in your plant.

Distributors in all principal cities.

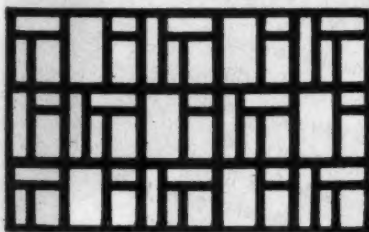
GRIP-STRUT division

THE GLOBE COMPANY

Manufacturers since 1914

4020 S. Princeton Ave. • Chicago 9, Ill.

Grilles



FOR THAT
DISTINCTIVE
LOOK

Just as eye-appealing as they are functional, Hendrick Perforated Metal Grilles will greatly enhance the beauty of your decorative motif.

They provide more-than-ample open area for the free passage of air, and are available in a wide variety of designs to best set off your decor. And they're easy to install—always lie flat because of a special flattening operation in their manufacture.

Over one hundred basic designs are available to choose from—many are obtainable only from Hendrick. Hendrick will gladly cooperate with architects to help select from a wide range of standard and special designs. For more complete details write Hendrick today!

Hendrick

MANUFACTURING COMPANY

38 DUNDAFF ST., CARBONDALE, PA. • Sales Offices in Principal Cities,
Perforated Metal • Perforated Metal Screens • Wedge-Slot Screens • Archi-
tectural Grilles • Mitco Open Steel Flooring • Shur-Site Treads • Armorgrids

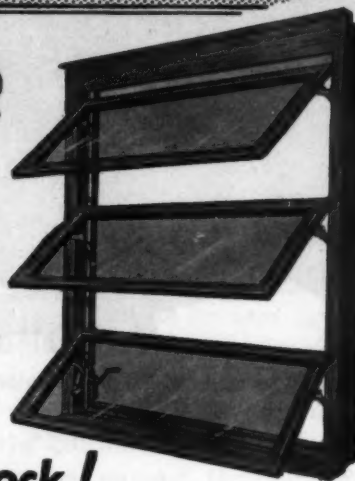


Specify with
CONFIDENCE!

WINDOW
WOODCO
PRODUCTS

Sold Exclusively
Through
Lumber Dealers

May be Glazed
with
WINDOW GLASS,
PLATE GLASS
or
THERMOPANE®



Easy to Lock!

WOOD WINDOWS WOMEN WANT!

WOODCO

E-ZEE



Loc

WOOD AWNING WINDOWS



BOOKSTEIN RESIDENCE, Neponsit, L. I., N. Y.—A. DAVIS & SON, Architects

**NOTHING TO ADJUST—NOTHING TO
GET OUT OF ADJUSTMENT**

Factory-Assembled of Kiln-Dried Ponderosa
Pine, Toxic-and-Water Repellent Treated

Finest Awning Window Made

Backed by WOODCO's 35 Years' Experience

WRITE or CALL FOR COMPLETE INFORMATION

— Permanently Displayed at —

WOODCO CORPORATION

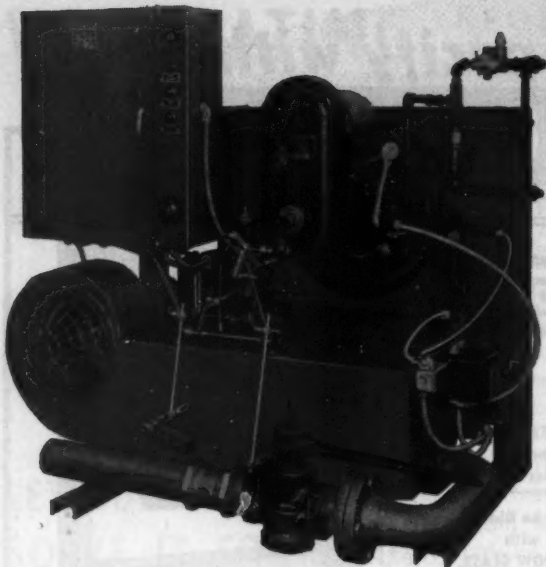
A DIVISION OF GENERAL WOODCRAFT CO., Inc. — NORTH BERGEN, N. J.

3590 N. W. 71st STREET

MIAMI 47, FLORIDA

ROCKWELL of RANDOLPH, Inc. • Wisc.

(Wholesale Millwork Mfg. Div.)



WEBSTER ROTONETIC* DUAL FUEL FIRING BURNER

- ✓ Sizes from 75 to 300 horsepower.
- ✓ Minimum gas pressure requirements.
- ✓ Low installation costs.
- ✓ Maximum efficiencies on BOTH gas and oil.
- ✓ Minimum base height requirements.
- ✓ Utilizes all grades of fuel oil.
- ✓ Extremely low noise level.
- ✓ Approved electronic combustion safeguard system.
- ✓ Simpler changeover than ever before.
- ✓ One hundred per cent forced draft.
- ✓ Completely assembled, piped, wired and tested.

Listed by Underwriters' Laboratories, Inc.

Write for Literature

*Trademark

These and many other outstanding features combine to provide the same dependable high quality performance as the WEBSTER DYNETIC gas burner. Neither fuel must suffer if the WEBSTER ROTONETIC is used. With integral pumps, integral oil preheaters for heavy oils, patented oil burner "flame-shaping" vanes, and full modulating or optional high-low control, the WEBSTER ROTONETIC is designed to provide long lasting customer satisfaction the year around.

It is furnished with a precast refractory front as an integral part of the burner assembly. The installer need only finish the furnace wall on each side and above the burner.

The WEBSTER ENGINEERING COMPANY

TULSA, OKLAHOMA

Division of SURFACE COMBUSTION CORPORATION, Toledo, Ohio

Handles anything
up to 12 feet!



Save Draftsmen's Time YOUR TYPIST CAN DO THE JOB BETTER

The Vari-Typer lettering machine is the fastest and most economical method of lettering specifications on tracings and drawings. No more tedious time-consuming lettering operations requiring expensive time of skilled draftsmen.

The Vari-Typer lettering machine is four to five times faster than hand lettering and is operated by an office typist. Every letter and figure is uniformly clear and distinct. Instantly changeable type, with hundreds of different styles to choose from in sizes ranging from 6 pt. to 18 pt. Write today for information.

Vari-Typer

Lettering Machine

Body copy produced on DSJ
Model. Headlines photo-
composed on the Headliner.

RALPH C. COXHEAD CORP.
720 Frelinghuysen Avenue
Newark 5, N.J.

Please send Vari-Typer Book E-22

NAME.....
COMPANY.....
ADDRESS.....
CITY.....ZONE...STATE....

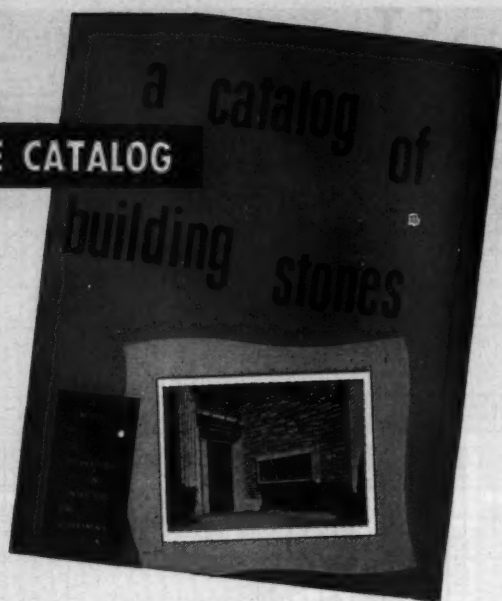
New industrial floor for use over concrete

- Tough, durable hardwoods
- Extra thick (25/32 inch)
- Resists wear and abrasion
- Will not powder or dust
- Preserved for long-life
- Less wear and tear on power trucks
- Less damage to tools and parts
- Warmer and less fatiguing to workers

Write for folder and complete data
E. L. Bruce Co., Memphis 1, Tenn.

Bruce
DURA-WOOD
BLOCK FLOORS

STONE CATALOG



The first complete listing of Building Stones available in the United States and Canada, with full color photographs of every type of stone, detailed descriptions, characteristics and sources. Published by THE STONE COUNCIL and offered to architects, contractors and builders at no cost. Write to

STONE COUNCIL

A DEPARTMENT OF THE INTERNATIONAL
CUT STONE CONTRACTORS' AND QUARRYMEN'S ASSOCIATION
1700 Summer Street, Stamford, Conn.



Here's Profitable Key Control

Any key can be instantly located or identified with our system. Valuable time will be saved and costly inconvenience avoided in the future.

Write today for free
catalogue AR-15

TEL KEE
Moore Key Control

Key Cabinets, System Parts & Illustrated Instructions FOR FILING AND CONTROLLING KEYS
P. O. MOORE, INC., 300 Fourth Avenue, New York 10, N. Y.

NEW, IMPROVED

NIBROC

towel cabinets

load faster, hold more!



Nibroc Towels, too, keep pace with today's demand for better service. Superior absorbency, strength and softness make them economical because fewer are used. Specified for use in more office buildings, factories, schools, stores, hotels and hospitals than any other paper towel. Multifold or simple fold—white or natural.

Nibroc Multifold Cabinets are available in 3 models—wall, floor and recessed. Hold 50% more towels—require less servicing. Wall cabinets in durable white enamel (with or without mirror) and easy-to-clean chromium plate or stainless steel.

NEW, IMPROVED RECESSED DISPENSER and WASTE RECEPTACLE

New access doors with lock. New type dispenser for easier loading and increased capacity. New type door makes towel supply immediately visible when door is open. Handsome 22-gauge stainless steel for long, trouble-free service. Warp-proof, mounted on continuous piano type hinges. Stainless steel waste receptacle easily emptied and replaced. For washrooms with heavy traffic.

Dispenser and waste receptacle available separately for washrooms where it is desirable to stagger towel cabinets and receptacles.

Write Dept. NH-1, Brown Company for descriptive folder and complete information.

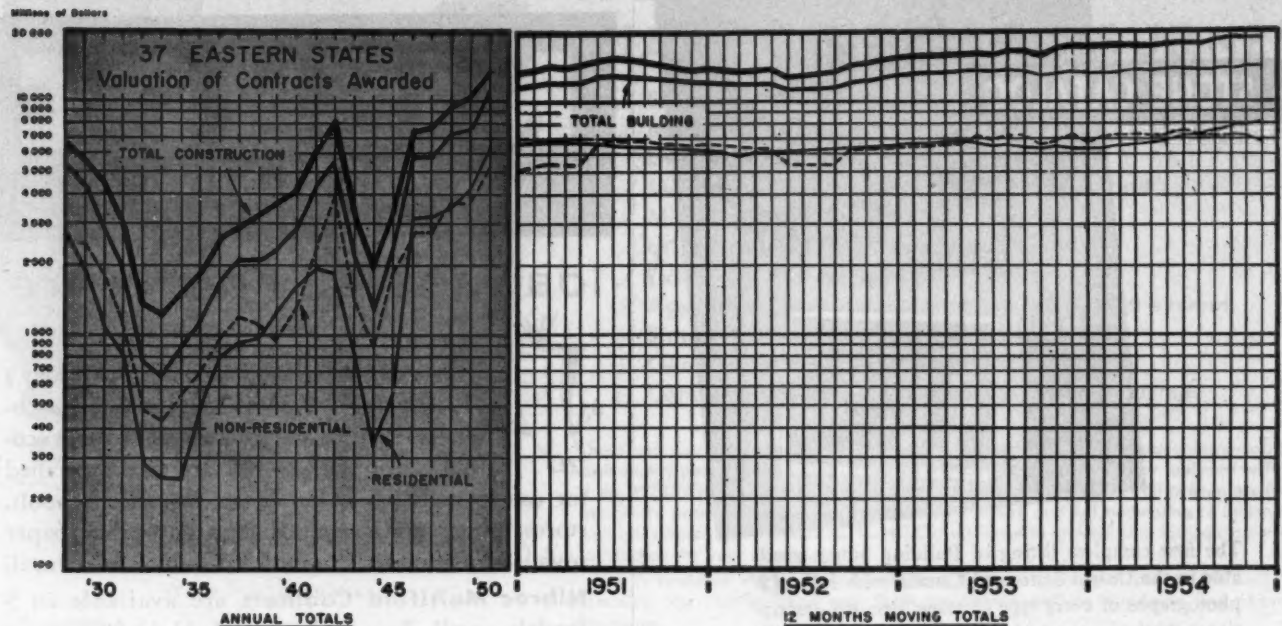


BROWN  **COMPANY**
Berlin, New Hampshire

General Sales Office: 150 Causeway Street, Boston 14, Mass.

THE RECORD REPORTS

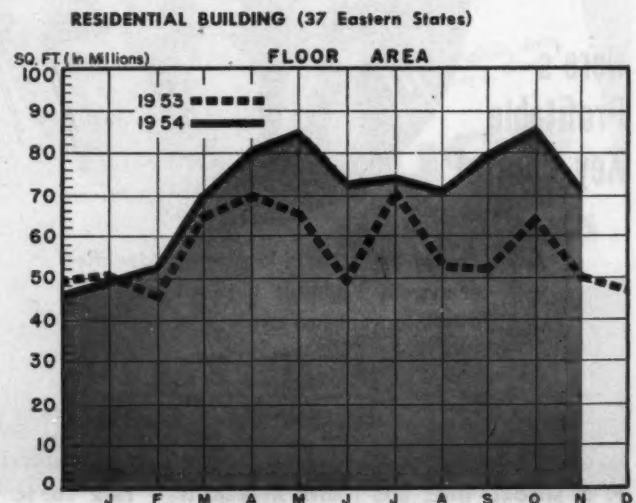
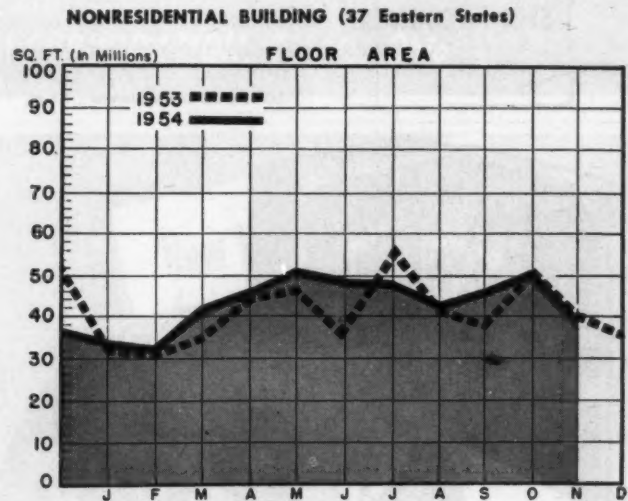
CURRENT TRENDS IN CONSTRUCTION



1954 VOLUME SETS NEW ALL-TIME HIGH

THE YEAR 1954 set the record long predicted for it on the basis of only 11 months' activity. F. W. Dodge Corporation reported the volume of construction contracts awarded in the 37 states east of the Rockies in 11 months of 1954 reached \$17,941,370,000, more than the figure for the entire year 1953. The new record rested on a 28 per cent gain in residential building, a three per cent gain in public and private works and utilities and a strong showing in the nonresidential category which kept it less than one per cent behind the first 11 months of 1953 in spite of the fact that huge atomic energy plant contracts inflated the 1953 total. The figure for 11 months of 1954 was 11 per cent ahead of the corresponding 1953 period. November 1954 awards of \$1,498,850,000 themselves set a record as the highest November total in Dodge history, nearly eight per cent ahead of November 1953. Residential building in November was 46 per cent above November 1953, nonresidential off 20 per cent and heavy engineering up less than one per cent.

Charts by Dodge Statistical Research Service



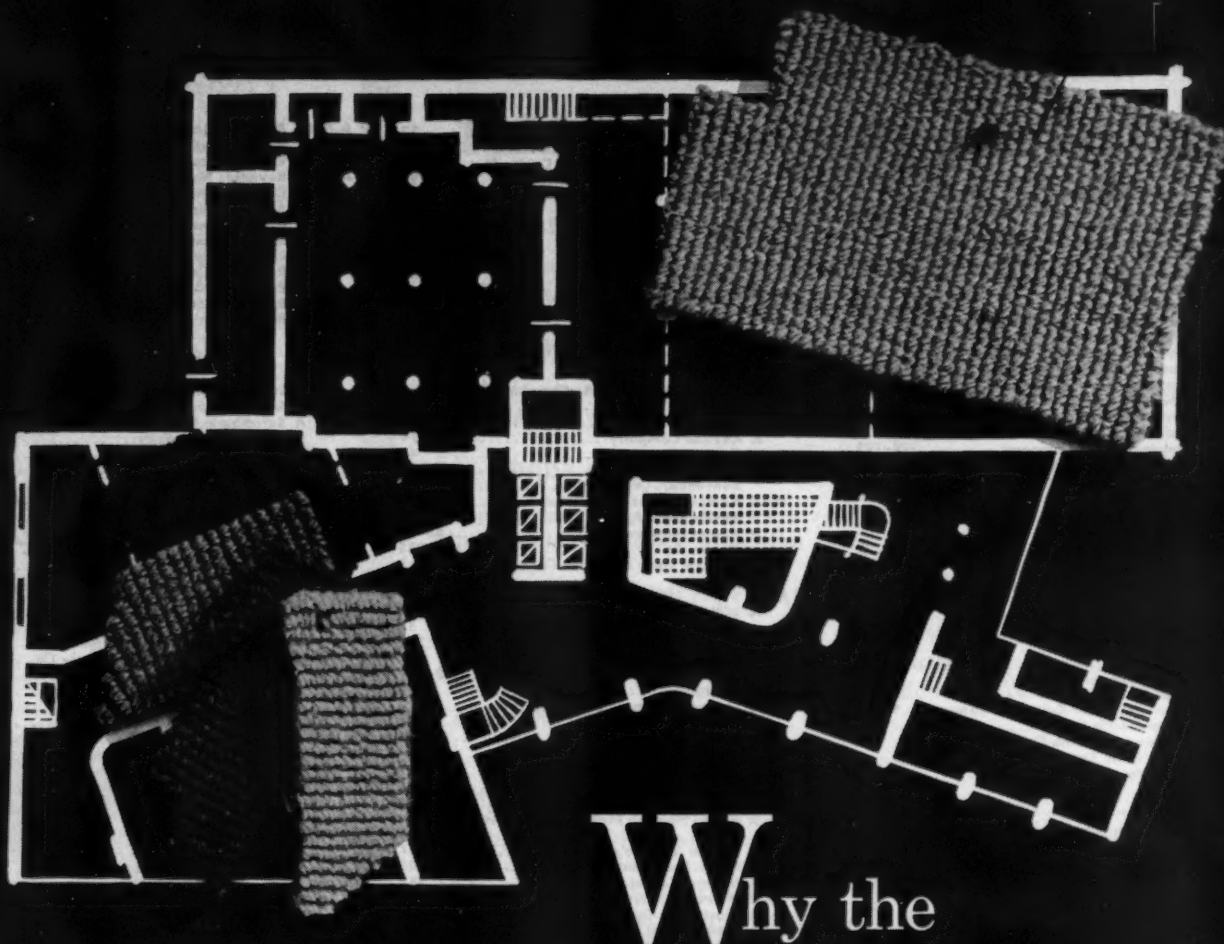
EDUCATIONAL AND SCIENCE BUILDINGS* — SELECTED YEARS

F. W. Dodge Corporation Contracts Awarded
(37 Eastern States)

Valuation (Thousands of Dollars)

Year	Annual Total	Monthly Average	Year	Annual Total	Monthly Average
1929	369,590	30,799	1950	1,179,787	98,315
1935	168,259	14,021	1951	1,334,623	111,218
1943	62,407	5,201	1952	1,471,612	122,634
1947	391,853	32,654	1953	1,719,997	143,333
1953			1954		
Jan.	106,004	July	131,684	July	201,273
Feb.	102,187	Aug.	145,569	Feb.	144,281
Mar.	123,556	Sept.	138,195	Mar.	178,875
Apr.	147,491	Oct.	152,889	Apr.	170,918
May	164,067	Nov.	140,283	May	189,036
June	148,173	Dec.	176,165	June	185,687
			11 mos.—		
			1,858,658		

* See pages 125-150 for Building Types
Study No. 218, College Buildings



Why the best-laid plans of architects include Bigelow Gropoint®

Before Gropoint, loop pile didn't have enough tuft bind to keep tufts from pulling out under the heavy abuse of commercial traffic.

Then along came Bigelow with its Lokweave® process to give loop pile the strongest tuft bind in the industry! The special compound applied to the back locks in every tuft and forms a selvage on every edge. Woven or damaged parts may be removed and easily replaced.

Today, Gropoint *remains* the standard for store and office use!

Gropoint is an excellent example of Bigelow's unending research to produce carpets that lead in versatility and serviceability . . . the reason why Bigelow continues to be the number 1 name in carpets and the number 1 choice of architects.



Bigelow Contract Dept., 140 Madison Ave., N. Y. C.

Bigelow



Number 1 name in Carpets

INDEX TO ADVERTISING

A-IC Acme Industries, Inc.	192-193
A-IC-IC Adam, Frank Electric Co.	99
A Adams & Westlake Co.	87-88-89-90
Advance Transformer Co.	111
Aerofin Corporation	70
A-IC Aetna Steel Products Corporation	208
Ainsworth Lighting Inc.	277
A Airtherm Manufacturing Co.	258
A-IC Alan Wood Steel Company	254
A Alberene Stone Corp.	250
Aloe, A. S. Co.	277
A Alumiline Corporation	272
A-IC Aluminum Window Mfrs. Association	278
A-IC American Abrasive Metals Co.	36
A American Art Metals Company	23
A American Brass Company	64-65
American Gas Association	194-195
A American-Olean Tile Company	286
A Anomostat Corp. of America	179
Architectural Record	256-257
A-IC-IC Armstrong Cork Company	198-199
A Art Metal Company	216-217
Avoncraft Division of Avondale Marine Ways, Inc.	33
A-IC Barber-Colman Company	44-45
Belmer Lighting Co.	281
A-IC Benjamin Electric Mfg. Co.—Leader Division	85
A-IC Bethlehem Steel Company	86, 275
Bigelow Rugs & Carpets	297
A Blakeslee, G. S. & Co.	284
Books	274, 283-292
A-IC Brown Company	295
A-IC Bruce, E. L. Co.	294
A Brunswick-Balke-Clender Company	92-93
A Bryant Electric Co.	118
A-IC Burt Manufacturing Company	292
A Byers, A. M. Company	4
A-IC Byrne Doors, Inc.	206
A Cabot, Samuel, Inc.	291
A Cambridge Tile Mfg. Co.	211
A Carpenter, L. E. Company	109
Carpet Institute, Inc.	80-81
A-IC-IC Carrier Corporation	94
Cast Iron Soil Pipe Institute	267
A-IC-IC Coco Steel Products Corporation	96
A-IC-IC Celotex Corporation	62
A Century Lighting Inc.	286
A-IC-IC Certain-Teed Products Corp.	110
A Chase Brass & Copper Co.	74
A Claridge Products & Equipment Co.	268
A Concrete Reinforcing Steel Institute	263
A Congolium-Nairn, Inc.	189
Coxhead, Ralph C., Corp.	294
LC Crane Co.	40-41
A Curtis Companies Service Bureau	291
A Curtis Lighting, Inc.	121
A Culler Mail Chute Co.	278
A Day-Brite Lighting, Inc.	202-203
A-IC Detroit Steel Products Co.	239, 241
A Dicks-Pontius Company	97
A Dodge Cork Company, Inc.	120
A Dunham, C. A. Co.	235
A-IC Electro Silv-A-King Corporation	300
A Ellison Bronze Co.	280
A Fairhurst, John T. Co., Inc.	289
A Farr Company	284
Federal Seaboard Terra Cotta Corp.	49
A-IC Fitzgibbons Boiler Company, Inc.	223
A Fleet of America, Inc.	260
A-IC-IC Flintkote Company	289-290
A General Bronze Corporation	191
IC-A General Electric Co., Apparatus	60-61
General Time Corporation	264
General Woodcraft Co., Inc.	293
A Getty, H. S. & Co., Inc.	66
Globe Company	293
A Goodyear Flooring Dept.	27
A-IC Grinnell Company	287
Guth, Edwin F., Company	103
A Haerfel, W. J. & Co.	285
A Heger, C. & Sons Hinge Mfg. Co.	50
A Hamilton Manufacturing Company	210
A Hansson, E. J. Inc.	8
A Haws Drinking Faucet Co.	246
A-IC Hendrick Manufacturing Co.	293
A Hilliard Chemical Co.	100
Holophane Company, Inc.	37
A-IC-IC Hope's Windows, Inc.	271
A Horn Division	92-93
A-IC Hunter Fan & Ventilating Co.	219

Infra Insulation, Inc.	13
LC-A Inland Steel Products Co.	76-77
A International Cut Stone Contractors & Quarrymen's Association	295
A-IC International Steel Company	232
A-IC Jackson & Church Co.	288
A Janitrol Heating & Air Conditioning Division	98
A Jenn-Air Products Co., Inc.	200
A-IC Johns-Manville	58
A Johnson Service Company	119
A-IC Josam Manufacturing Co.	236-237
Kaiser Aluminum & Chemical Sales, Inc.	220-221
A Kawneer	14
A Kayline Company	279
A Kendall Company	43
A-IC Kenille, Inc.	102
A Keni-Moore Organization, Inc.	38
A-IC Kewanee-Ross Corporation	116
A Kewanee Mfg. Co.	234
A Knapp Brothers Mfg. Co.	68-69
A Kohler Co.	285
A-IC Kwikset Sales & Service Company	1
A LCN Closers, Inc.	204-205
A Lucado Steel Company	55
A Larsen Products Corp.	288
A Lehigh Portland Cement Company	17
A-IC-IC Libbey-Owens-Ford Glass Co.	248-249
A Lightoller	245
A-IC Louisville Cement Company	79
A Lowell Manufacturing Co.	182
A Loxit Systems, Inc.	108
A-IC Macomber, Incorporated	106
A-IC Mahon, R. C. Company	47
A Maple Flooring Manufacturers Association	186
A Marble Institute of America	247
A-IC Mario Coil Company	228
A Marmet Corporation	289
A-IC Master Builders Co.	2nd Cover
A Mastec Tile Corporation of America	3rd Cover
A Medart, Fred Products, Inc.	57
A Medusa Portland Cement Company	255
A-IC Mengel Company	113
A Michaels Art Bronze Co., Inc.	242
A Miller Company	227
A-IC Mills Company	7
A Minneapolis-Honeywell	51-52-53-34
A-IC Mississippi Glass Company	209
A-IC Modine Manufacturing Company	261
A-IC Monsanto Chemical Company	207
A Moore, P. O., Inc.	295
A Morrison Steel Products, Inc.	32
A Mosaic Tile Company	225
A Mesley Electronics Inc.	279
A-IC-IC Natco Corporation	299
A National Clay Pipe Mfrs., Inc.	112
A-IC National Electric Products Corp.	75
A National Tube Division	262
A Neo-Ray Products, Inc.	233
A Nesbitt, John J., Inc.	31
A-IC Norton Company	218
A Onan, D. W. & Sons, Inc.	224
A Otis Elevator Company	95
A-IC-IC Overhead Door Corporation	39
A-IC-IC Owens-Corning Fiberglas Corp.	259
A Pass & Seymour, Inc.	290
A Patterson-Kelley Co., Inc.	59
A Penn Metal Company, Inc.	226
A Permaglas Division	187-244
A Peterson Window Corp.	222
A-IC Pittsburgh Plate Glass Co.	78, 251
A-IC Pittsburgh Steel Products Company	281
A Polyken Products Dept.	43
A Portland Cement Assoc.	266
A Powers Regulator Co.	22-23

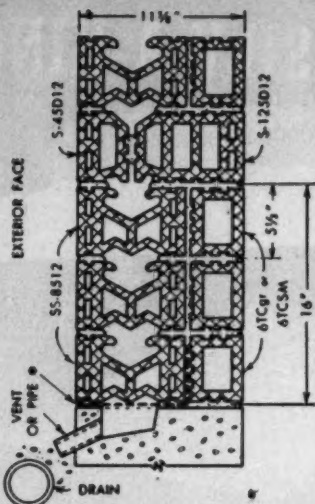
MANUFACTURERS' PRE-FILED CATALOGS

Symbols "A", "IC", and "LC" indicate that catalogs of firms so marked are available in Sweet's Files as follows: (A) Architectural File, 1954 (IC) Industrial Construction File, 1954 (LC) Light Construction File, 1954

A-IC-IC Raynor Manufacturing Co.	278
Ready-Power Co.	290
A-IC-IC Revere Copper & Brass, Inc.	229
A-IC-IC Reynolds Metals Co.	273
A-IC Reznor Manufacturing Co.	180
IC Ric-Wil Incorporated	67
A Rixson, Oscar C. Company	18-19
Robbins Flooring Company	30
A-IC Roddis Plywood Corporation	91
A-IC Rolfscreen Company	104-105
A-IC Rotary Lift Co.	2-3
A-IC-IC Ruberoid Company	124
A-IC Rust-Oleum Corporation	201
A St. Charles Manufacturing Co.	63
A Sarco Company, Inc.	184
A Sarcoserm Controls, Inc.	101
A Sargent & Company	190
A Schacht Associates, Inc.	215
A Schieber Sales Company	287
A Schlage Lock Company	72-73
Scientific Apparatus Makers Association	21
A Seaporal Metals, Inc.	84
A Sedgwick Machine Works	193
A Signal Engineering and Mfg. Co.	277
A Silway Associated Company	188
A Skylite Lighting Inc.	188
A-IC Sloan Valve Company	4th Cover
Smith, A. O. Corporation	187, 244
Smith, J. R. Mfg. Co.	282
A Smithcraft Lighting Division	285
A-IC Southern Sash Sales & Supply Co.	197
A Sperti Faraday, Inc.	214
A Square D Company	71
A Stanley Works	83
A-IC Sterling Hardware Mfg. Co.	122
A Stone Council	295
A Stromberg Time Corporation	264
A-IC-IC Summitville Tiles, Inc.	281
A Surface Combustion Corp.	98
A Swedish Crucible Steel Company	115
A-IC Taylor, Halsey W. Co.	238
Thompson Electric Co.	48
A-IC Thrush, H. A. & Company	56
A Tile Council of America	243
A-IC-IC Tile-Text Division	289-290
A Timber Structures, Inc.	82
A Titus Manufacturing Corp.	28-29
A Todd Shipyard Corp.	291
A-IC Trade-Wind Motor Fans, Inc.	279
A-IC Trane Company	212-213
A Tuttle & Bailey, Inc.	34-35
A-IC Ualco Aluminum Window	197
Underwood Corporation	240
A United States Air Conditioning Corp.	123
A-IC United States Plywood Corp.	230-231
A United States Quarry Tile Co.	276
IC United States Steel Corp. Subsidiaries	262-269
A Universal Atlas Cement Company	269
A Uvalde Rock Asphalt Company	107
A-IC Valley Metal Products	265
A Vogel-Peterson Co.	287
Vogl, Henry Machine Co.	270
A-IC Walker Brothers	76-77
Wallace, William Company	120
A-IC Ware Laboratories, Inc.	114
A Wayne Iron Works	117
A Webster Engineering Company	294
A Western Pine Association	122
A Woodco Corporation	293
A Worthington Corporation	286
A Wright Manufacturing Co.	196

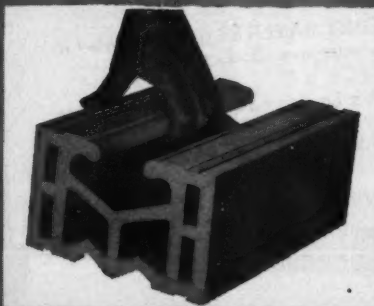
A-IC York Corporation 252-253

New York—H. Judd Payne, Publishing Director; Robert F. Marshall, General Manager; Tom Tredwell, Advertising Mgr.; Benton B. Orwig, Creative Service Manager; M. A. Murphy, Advertising Production Manager; Harry M. Horn, Jr., James E. Boddorf, 119 W. 40 St.; BOSTON—Harry M. Horn, Jr., 855 Park Square Bldg.; CHICAGO—Claude B. Riemersma, Robert T. Franden, David K. Bortz, James A. Anderson, Charles L. Reed, Jr., 700 Merchandise Mart; CLEVELAND—John C. Jackson, Joseph F. Palmer, 321 Hanna Bldg.; LOS ANGELES—Bob Wettstein, 672 South Lafayette Park Place; MIAMI—Benton B. Orwig, 802 N. W. First St.; PHILADELPHIA—Tom Tredwell, 1321 Arch St.; PORTLAND—Bob Wettstein, 1220 S. W. Stark St.; ST. LOUIS—Claude B. Riemersma, W. Gray Wilson, 721 Olive St.; SAN FRANCISCO—Bob Wettstein, Howard Bldg., 209 Post St.



SECTION OF 12-INCH WALL OF
NATCO DRI-SPEEDWALL TILE

* Weep holes required on approximate 3' centers unless drainage pipes or vents are provided.



SPEED HANDLE PERMITS EASY HANDLING

Insure Strong, Dry Walls with **NATCO Dri-Speedwall TILE**

CAPTIVE AIR SPACES

Walls are insulated against rapid changes in temperature. Completed buildings are cool in summer and warm in winter.

NON-THRU MORTAR JOINTS

Widely separated mortar joints very effectively resist moisture penetration through the wall.

WIDE DOUBLE SHELLS

Strong, secure mortar joints are assured, together with ample bearing, plus minimum wastage of mortar.

SMOOTH BUILT-IN HANDLE

Permits quick and easy handling—prevents cuts and abrasions to the mason's hands, so common in laying other materials. One hand for the tile—the other for the trowel. This results in more efficiency and greater economies in erection.

DRY WALL FEATURE

The Natco Dry-Wall feature consists of a series of interior troughs in which any small amount of moisture, that may penetrate through the exterior mortar joints, is directed to the open "V-type" channels. There it runs off through weep holes to the outside of the foundation wall instead of going through to the interior surface of the wall.

Typical buildings constructed with walls of NATCO Modular Unglazed Dri-Speedwall TILE



Colgate-Palmolive Building, Jeffersonville, Ind.
Architects and Engineers: Albert Kahn Associated
Architects & Engineers, Inc., Detroit, Mich.



Rochester Gas & Electric Corporation Plant,
Rochester, N. Y., Architects and Engineers:
Gilbert Associates, Inc., Reading, Pa.



Schneider Textile Mills, Taylorsville, N. C.
Architects and Engineers:
Biberstein & Bowles, Charlotte, N. C.

FURNISHED IN

3 POPULAR FINISHES

- Manganese Spot
- Buff Unglazed
- Salt Glazed



NATCO DRI-SPEEDWALL TILE is highly resistant to moisture and thoroughly fireproof. It's termite and vermin proof and cannot rot or decay. Assures greater load-bearing strength plus utmost resistance to lateral as well as vertical pressures. Never needs painting or repairs . . . stays free from shrinking and cracking. Especially designed for industrial, commercial, and multiple housing construction. Ideal in appearance and practical—wherever low cost and speedy erection are important factors. Write us today for more specific data on your particular job.

17 Strategically Located Clay Plants

NATCO CORPORATION

327 Fifth Avenue, Pittsburgh 22, Pa.



new lighting solutions from ELECTRO SILV-A-KING

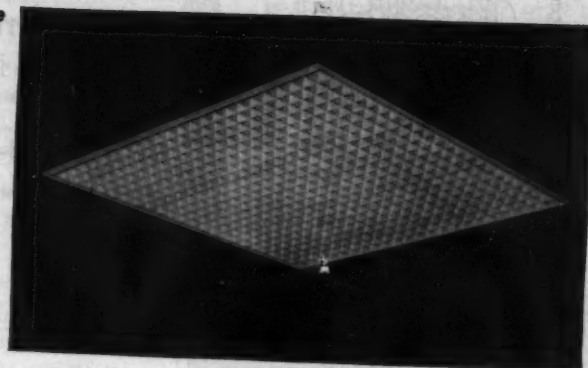
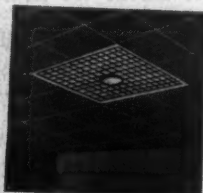
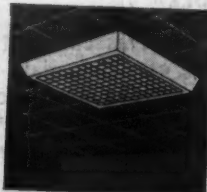
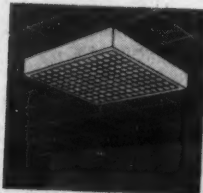
MODULAR SQUARES

PROBLEM How to create larger light source areas more economically . . . and how to utilize the same basic fixture throughout the installation.

BAYLITE . . . in modular squares from 2' x 2' to 5' x 5' for surface or recessed mounting, slimline or fluorescent.

Lighting patterns take on new flexibility with versatile BAYLITES. They can be used individually, in continuous runs, or grouped to create a "louver-all" appearance for large light source areas with a minimum number of fixtures.

BAYLITE units can be recessed or surface mounted . . . and the extremely wide range of possible light intensities allow their use throughout an entire installation so as to achieve a pleasing, uniform effect.



ELECTRO SILV-A-KING BAYLITES are available in several models or to your specifications.

- 2' x 2', 2' x 4', 4' x 4', 5' x 5'.
- Four, Six, Eight or Ten Lamps • Metal sides or skirts
- Gimbal Ring spots available for PAR-38 lamp
- 35° x 35° shielding — with standard metal louver (Plastic available)
- Rapid Start • Standard Fluorescent • Slimline

TM TROFFER SERIES

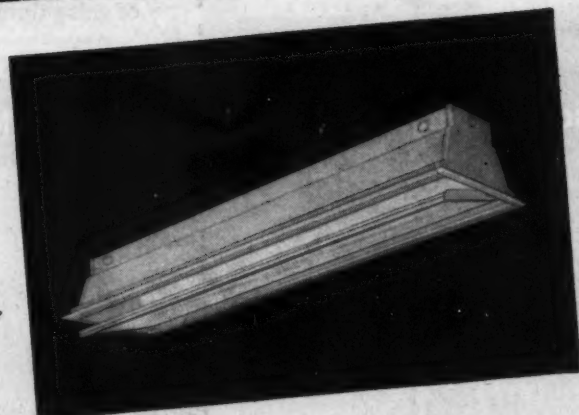
PROBLEM How to improve the aesthetic qualities of Troffer lighting with a reduction in installation and servicing costs.

Exclusive

magic frame

TROFFERS . . . eliminate all exposed, unsightly door screws and latches. Exclusive simplified installation provides "Speedy Latches" in wireway channel for efficient and simple hanging. All electrical components are contained on a removable chained cover.

"MAGIC FRAME" Troffers have no unsightly protuberances to disturb the trim lines of the fixture. Doors lock by gravity, hinge on two concealed pivots for quick maintenance. Completely removable by merely lifting and shifting. For installation, maintenance or removal of the door, there are no screws to loosen, remove or lose . . . doors are interchangeable into any like



Magic Frame fixture.

"Magic Frame" Troffers are available with all types of flat glass and plastic diffusers such as: ALBA-LITE, FOTA-LITE, CRYSTAL-LITE, TWINLENS, P4 DIAMOND PATTERN PLEXIGLAS. 2-ft., 4-ft., 5-ft., 8-ft., lengths. Rapid Start • Standard Fluorescent • Slimline.

Write for the name of the ELECTRO SILV-A-KING district manager near you . . . and new Specification Data Catalog.

ELECTRO SILV-A-KING CORPORATION

1535 S. Paulina Street, Chicago 8, Ill. • Spruce and Water Streets, Reading, Pa.